

at Dr D. C. Moore's
from the Translator.
2

AN ESSAY

ON

THE NATURE AND TREATMENT

OF

APOPLEXY.



BY

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TO

The Members of the Medical Profession

THIS LITTLE WORK IS INSCRIBED

BY THEIR

HUMBLE FELLOW LABOURER,

EDWARD COPEMAN.

P R E F A C E.

WHILST engaged in collecting cases of apoplexy with a view to future publication, I met with the following little work by M. Gay. His views are not such as are generally entertained; and from not having seen his work referred to by other writers on the subject, I have supposed it to be but little known.

Whether the reputation of M. Gay is such as to command the attention of the Medical Profession, with regard to any opinions he may have wished to disseminate, I am not competent to decide; but I think the Essay which I now venture to reproduce in an English form, may be read with advantage by those who are wedded to a mode of practice in apoplexy which can scarcely be defended by its results, and who would do well to abandon for a while their preconceived opinions, and direct their minds to the consideration, whether there may not be a more successful method of treating apoplectic patients than by indiscriminately letting blood.

There is probably no other disease to which the human frame is liable, which is so little under subjection to a remedy so highly recommended for its relief; and I am therefore at a loss to comprehend how it has happened that bleeding has attained almost to the reputation of a specific, or at least of being the only dependable remedy.

The recommendations of certain modern authors with respect to the use of the lancet in apoplexy are most extraordinary; they admit that the constitution may be in a state *the least likely to bear loss of blood*, and yet insist upon the necessity of employing it; the result being, in general, a *post mortem discovery of blood or serum extravasated in the brain*.

Dr. Cheyne says, “I admit that the constitution of those who are subject to apoplexy, is generally in a state of exhausted excitability, and, consequently, that blood-letting is a remedy which we would anxiously avoid; but when the attack has actually commenced, we are without an alternative: we must either empty the vessels, or resign the patient to his fate. *If the display of the brain destroyed by apoplexy does not prove how indispensable venæsection is, every other argument in favour of it must be accounted weak.*”* And again he says, “From the destruction of the organ, or

* Cheyne on Apoplexy, p. 52.

sinking of the strength, there is doubtless in this, as in every disease of increased vascular action, a period, after which the lancet cannot be used with any hope of relief; but as it requires great knowledge of the disease to indicate this period precisely, I believe it is a good rule *to have every patient in apoplexy, who is not plainly dying, bled*. If the patient is past the stage in which blood-letting is useful, no attentions are necessary but such as the dying require.”*

Surely here the practice is based upon a theory connected with the morbid appearances alone, and not with the experience of its good practical effects upon the living; otherwise it can hardly be imagined that blood-letting would be so strongly recommended where it is allowed to be a “*remedy which we would anxiously avoid*.”

Notwithstanding the strong advocacy of bleeding in apoplexy by modern authors, it yet appears that their testimony is not much in favour of the success of their favourite remedy; for Dr. Abercrombie, who says that, “in arresting the progress of the disease, our first reliance is upon large and repeated bleeding,” adds that, “the first decided improvement of the patient is generally under the influence of powerful purging.”†

* Cheyne on Apoplexy, p. 64.

† On Diseases of the Brain, p. 290.

I do not pledge myself to the adoption of the entire views of M. Gay, indeed I am very sceptical as to the soundness of *some* of his theoretical assertions; but I think he advances historical proofs and plausible arguments in favour of the good effects of a different plan of treatment to that usually followed in this country; and if others think the same, a perusal of this Essay may lead to a patient and perhaps profitable consideration of the treatment of cerebral apoplexy.

With the hope of such a result, I offer the translation to the notice of my fellow practitioners; the execution of it must, I am well aware, be very defective, owing to constant and laborious professional employment, and a by no means critical knowledge of the French language. I hope those who may chance to read it, will be lenient in their judgment, and take the will for the deed; overlooking its imperfections and considering only the motives which have led to its publication.

COLTISHALL, 1843.

VIEWS
OF THE
CHARACTER AND TREATMENT
OF
APOPLEXY,

IN WHICH THE DOCTRINE OF M. PORTAL CONCERNING
THAT DISEASE IS REFUTED.

APOPLEXY is commonly divided into two species ; the one *serous*, which is treated by evacuants ; the other *sanguineous*, in the treatment of which blood-letting is employed.

M. Portal maintains that every apoplexy is sanguineous, and that the disease ought always to be treated by blood-letting.

Were we disposed to be severe upon him, we might refer to some little incoherence in his assertions ; since, after having stated at page 289 * that there are no serous apoplexies, he says, at page 292, that serous apoplexies do sometimes occur. But let us pass over this contradiction, and examine the depth of his doctrine. The

* See Mémoires sur plusieurs Maladies, par A. Portal, tom. 1. Paris, 1800.

depth of his doctrine, his firm, constant belief is, that what is supposed to be serous apoplexy, is sanguineous, and that it is always necessary to bleed in apoplexy.

One is curious to understand what are the motives which have determined him to adopt so extraordinary a method of treating apoplexy. He has himself explained them to us at the commencement of his first "*Mémoire sur l'Apoplexie :*" "I had," he says, "adopted this doctrine (that which recognizes two species of apoplexy) both in my practice and in my lectures, until I had an opportunity of opening the body of an advocate who died after having experienced all the symptoms of serous apoplexy. The head was carefully opened, and the following appearances were observed: the vessels of the pericranium, and of the dura and pia mater, were full of blood; the vessels which run amongst the convolutions of the brain, were dilated and distended with blood; it seemed as if the brain were covered with an injected vascular network; the plexus choroides was also gorged with blood, and there was a good deal of blood extravasated at the base of the cranium; the ventricles of the brain were dry; we found no effused fluid in them. These circumstances are an evident proof that the advocate whose history I have just described died of true sanguineous apoplexy, and not from serous apoplexy; that he ought to have been treated in

a totally different manner ; and that venesections ought principally to have been insisted upon.” *

Is the light afforded by this examination sufficient to overthrow the whole fabric of a doctrine which all physicians, from Hippocrates to the present time, have supported ? The slightest consideration will show that M. Portal has decided much too precipitately. I shall only observe, for the present, that his examination was very incomplete, since he opened neither the chest, stomach nor abdomen. Yet, when the subject is one who has died of apoplexy, these cavities should attract particular attention, on account of the extreme sympathy which exists between them and the brain.

The rest of his first memoir contains four cases. Of the two latter, one was an examination of a body brought to his anatomical theatre, and is insignificant. The other, which is scarcely less so, is as follows :

“ In 1767, a butcher died with all the symptoms of sanguineous apoplexy ; he was naturally very fat, and during the attack his countenance was of a colour nearer black than red ; he had been frothing at the mouth, and his pulse was full and contracted (*concentré.*) In spite of the greatest attentions promptly afforded him, this patient died. I was present at the opening of the body, and witnessed the following appearances :

* *Mémoires sur plusieurs Mal.* t. 1, pp. 282 and 284.

the ventricles of the brain were filled with reddish serum, and the choroid plexus loaded with hydatids of considerable size." *

As fulness of the pulse indicates dilatation of the artery, and concentration indicates contraction, it is difficult to understand how this patient's pulse could be at the same time *full and contracted*; a more unsatisfactory case could scarcely have been presented: there is neither the history of the disease nor of the treatment, and the head was the only part examined.

The author states that the butcher died in spite of the greatest attentions *promptly afforded him*. The treatment therefore was not appropriate, because, although promptly administered, it was not effectual. But why not have explained more clearly the nature of this treatment? It is very probable that bleeding, as it was considered by M. Portal to be the true remedy for apoplexy, was part of that treatment which was *promptly administered*. We may therefore regard this case as testimony opposed to his doctrine.

Now let us consider the other two cases.

In one it appears that M. Bertrand, having fallen from his horse, a strong emetic had been given him before M. Portal was called in; when the latter arrived, he ordered the patient to be bled in the jugular vein, and he died of apoplexy. It seems natural to infer from such an occurrence

* T. 1, p. 291.

that blood-letting is prejudicial in apoplexy. This is not the mode of reasoning adopted by the author: "Bleeding," he says, "ought to have been carried to a greater extent, and employed sooner."* Sooner! To me, however, the treatment appears to have been very prompt. But to maintain that a patient who has sunk under the first bleeding should have been bled *more*, this is an assertion never before written!

Although the rage for shedding human blood is clearly carried in this instance almost to madness, it is no less true that I shall have to contend against the reputation of the author. But such objections, which are much too easy and too discouraging, ought not to be hastily made. We should in the first place, make ourselves certain as to what tends most to the preservation of the patient's life, and to consider that reasonable people judge of the reputation by the doctrine, and not of the doctrine by the reputation.

M. Portal, who, in the activity of his practice, prescribes, as we have seen, bleeding for the living and the dead, at the same time extends his watchfulness over the practice of his fellow practitioners.

"Physicians," he says, "are guilty of the grossest empiricism."† The expression is severe. I shall

* T. 1. p. 285.

† Observations sur la Nature et sur la Traitement de la Rage, par M. Portal. 1779. p. 8.

not, either for myself or for my brethren, answer by making a similar reproach ; I believe that our best answer will be found in our common endeavours not to deserve it.

Let us proceed, and demonstrate that the bleeding, which they regret not having been able to follow up by others, probably caused the death of the patient. Let us review the circumstances which attended M. Bertrand's accident : "He was carried," says M. Portal, "to the Hôtel des Mousquetaires, in a state of insensibility ; his countenance was deadly pale, his pulse small, contracted ; his respiration became very difficult and stertorous ; it was thought that the patient, while on horseback, had experienced a fit of apoplexy, and that in his fall he had drawn the bridle backwards and pulled the horse upon him." *

I ask, what is there in the circumstances of this accident to indicate the necessity for bleeding ? The fall alone, M. Portal will answer. And in that he deceives himself ; the fall alone does not create a necessity for bleeding. A great number of observations prove that it is upon the biliary system, and not on the vascular, that a fall makes an impression ; and that evacuants are more indicated than bleeding. † If M. Portal

* T. 1, p. 284.

† See Stoll Rat. Med. part ii. p. 276. *Lugd. Bat.*—Lombard, Dissertation on the Importance of Evacuants in the Cure of

were ignorant of the actual state of science on this point of practice, there is reason to be surprised at it; if he were acquainted with it, why has he not acted conformably to it in a case in which all the symptoms caused by the accident clearly contra-indicated bleeding? These considerations are confirmed by the result of the treatment, from which M. Portal cannot, unfortunately, draw his justification.

But is it conceivable that the author can give, in proof of the utility of blood-letting in apoplexy, the example of an apoplectic who, having been bled in the jugular, has died? What follows is perhaps still more inconceivable: — “I could,” he adds immediately after this history, “relate here other cases the result of which would be the same.”* They would prove, therefore, that the patients have died. And what would result from this accumulation of facts, if not the confirmation of the danger of his doctrine?

“Instructed by all these errors,” he still adds, “I have bled in the foot and jugular, persons who were supposed to be affected with serous apoplexy, with so much advantage, that, by this

recent Wounds, simple or severe. *Strasbourg*, 1782. — Also Plenck, *Pharmacologia Chirurgica*, p. 457, in which he quotes several authors, as Fabric. Hildan, Baillou, Boudon, Schmucker, whose observations support this point of practice.

* T. 1, p. 285.

treatment alone, they were recalled from the gates of death.” *

Truly, this is more astonishing! But here a reflection presents itself: How does it happen that, having in his possession cases which prove that, by bleeding alone, he has recalled from the gates of death persons considered to be affected with serous apoplexy, he passes over these in silence, and quotes only five, in four of which it seems the patients died, and in the fifth, that the patient did not owe his recovery to bleeding, as I am about to prove?

The author says, in the fourth observation recorded in his first memoir, when relating the history of the disease of M. le Marquis de Breda, that after they had administered to him an emetic a second time, and he had advised a second bleeding, the patient discharged from the mouth a large quantity of frothy matter, and very little else. They gave him, he says immediately after, an injection, which caused abundant evacuations; the limbs by degrees recovered their sensibility and power of motion; the respiration became almost natural. †

Here certainly was a beneficial effect, a decided relief. Must it be attributed to the emetic or to the bleeding? I am quite aware, the author says positively, that the emetic was inefficient, and that this patient owed his recovery to the

* T. 1, p. 286.

† Ib. p. 287.

full bleedings that were employed.* But the spirit of system can alone prevent a perception of the consequences which result from facts. Here they are very obvious. There was administered to this patient, and it is the author himself who states it, an emetic twice, and once some emetic wine as a lavement. The effect corresponded with the means employed; there were the evacuations which commonly follow the administration of such remedies; these evacuations procured the relief which they commonly do procure; and M. Portal would have it that the bleedings did all the good! This does not seem to me to be correct reasoning.

Since the author maintains that a patient to whom an emetic had been administered as many times as bleeding, owed his recovery to the bleeding only, what would he have thought of the following case, related by Van-Swieten?

“A very celebrated man, being in company with his friends, suddenly turns his eyes, loses the power of speech, and falls down apoplectic. Some very skilful physicians who were present thought the disease incurable. However, a quarter of an hour afterwards, without any other remedy having been tried than one bleeding, the patient vomited, besides the food contained in the stomach, so large a quantity of phlegm, that it appeared almost impossible that a human stomach

* T. 1, p. 288.

could have contained it. Sensation and the power of motion returned immediately; they were followed by a tranquil sleep, which completed his recovery; and the following day he was quite well.” *

M. Portal would see without doubt in this history, a victorious proof in favour of the employment of bleeding in apoplexy; and the truth is, he quotes, in his memoirs, no case which would appear so decisive, since here the patient was perfectly cured without any other treatment than bleeding. Nevertheless Van-Swieten, although an advocate for bleeding, and a believer in the existence of inflammatory apoplexy, is so far from attributing the cure of this patient to the bleeding, that, on the contrary, he quotes this example in order to prove that the cause of apoplexy is sometimes seated in the *primæ viæ*, and is of a nature to yield to vomiting and purging. Schroeder, who quotes this history from Van-Swieten, draws from it the same inference as himself; † and I do not believe that any reasonable man could entertain a different opinion concerning it. Nevertheless M. Portal can neither judge of it thus without refuting himself, nor otherwise without resisting the truth. This position in which his system has placed him ought to make him appreciate the value of it.

* Comm. in Aph. Boerh. t. 3, § 1017, p. 286.

† Opusc. Med. t. 2, p. 379.

M. Portal might without inconvenience have taken upon himself the responsibility of the three emetics, which he pretends to have been ineffectual; for it is manifest that he owes to them the single cure of which he makes mention in this memoir.

It is therefore with a single successful case, the cure of which even cannot be attributed to bleeding, that M. Portal would prove the utility of blood-letting in all kinds of apoplexy, and overturn the mode of practice which the greatest physicians have hitherto adopted in the treatment of apoplexy! It must be confessed, the importance of the means appears but little proportioned to that of the undertaking! However, quite astonished at the excellence of his work, see with what entire satisfaction and confidence he explains himself at the commencement of his second memoir: "The observations," he says, "upon the nature and treatment of apoplexy, which I have communicated to the Academy of Science, and printed in the volume of 1781, have proved that many apoplexies supposed to have been serous, have nevertheless been sanguineous."

We have seen how he has proved it: but because it has all passed without contradiction, he takes this silence for a demonstration of its truth.

"Divers facts," he continues, intoxicated with his discovery, "have proved to me that the practice of physicians who prescribe emetics instead

of blood-letting in the supposed serous apoplexies, is as murderous as the theory on which it is founded is erroneous.” *

However weak may be the motives which have produced conviction in M. Portal, it is clearly very deep-rooted; and it may well be supposed that the man who so civilly reproaches his brethren with being murderers when they prescribe emetics instead of blood-letting, in supposed cases of serous apoplexy, would never administer an emetic in apoplexy: but this is far from being the case; for, after having thus explained himself at page 217, he inserts, at page 221 of the same memoir, in which he speaks of his treatment of a case of apoplexy, the following words: “Then deglutition having become free, I gave him an emetic, which effected most beneficial evacuations; the patient regained the power of speech.”

What! M. Portal has just prescribed bleeding! This remedy has his entire confidence, it succeeds; *deglutition* becomes free, and he discontinues it in order to administer a remedy which he looks upon as murderous! In truth, this is a very strange mode of proceeding! But how does it happen that a remedy which, administered by him in a fit of apoplexy, produces the most favourable evacuations, and which almost suddenly

* Mém. sur plusieurs Mal., par Ant. Portal, t. 2, p. 217.

restores the power of speech to the patient, becomes murderous when administered by other physicians?

Let us, however, proceed to examine the opinion of our author: his second memoir on apoplexy contains four cases.

The result of the treatment has been, it is true, the cure of the patient in these cases; but it must be remarked that, besides blood-letting, emetics were administered to these four patients, either by his advice or by that of other physicians; and although he continually repeats that the emetic did not effect the cure, it is probable that his memory has failed him, or that his observation has been defective.

It is allowable not to place implicit confidence in his observations, when we find facts stated, the inaccuracy of which is notorious, and may be easily verified by the whole world.

In order to deter physicians from giving emetics in apoplexy, the author says at page 225 of the second volume of his memoirs: "The stomach and abdominal muscles, in contracting, cause a reflux of the blood towards the superior parts; for in persons who are vomiting, all parts of the head receive much more blood than under ordinary circumstances; we might judge of this simply by the redness of the countenance, the inflammation of the eyes, and the bleedings of the nose, which result from it. It is not therefore

surprising that many apoplectics have perished during the act of vomiting."

This is nothing more than a system of the author. He supposes very gratuitously that, in the act of vomiting, the vessels of the head receive a larger quantity of blood than common. But upon what does he found this opinion? It could not be correct unless there were here some cause of dilatation of the vessels of the head: where is that cause? In the general spasm which an emetic produces, I can perceive only a cause of contraction, and not of dilatation.

The act of vomiting is entirely dependent upon the nervous system; the whole process occurs, not in the head, but in the stomach. By virtue of the irritation caused by the emetic upon the coats of this viscus, it contracts, its action is reversed, and its contents are discharged. This is the whole theory of vomiting; and this theory is true, for it is only the expression of facts; that of the author alters them. Happily, when M. Portal alleges as a proof of the congestion of the blood in the head, *the redness of the countenance, inflammation of the eyes, and the bleedings at the nose*, there is not a nurse who could not convince herself of the inaccuracy of this assertion. Where is the individual who has not either seen an emetic taken, or taken one himself? Well, I call upon all to remember their own experience in the matter. Let us observe a patient who is

vomiting; we shall see him pale, distorted in countenance, sometimes suffering inexpressible agony, and bordering upon illness. But the phenomena mentioned by M. Portal, which besides would not prove the existence of sanguineous congestion, do not commonly manifest themselves.

Not that patients may not sometimes experience hæmorrhage in the act of vomiting; hæmorrhages occur at all periods of the disease; but they depend so little upon the act of vomiting itself, that one daily administers an emetic to patients actually attacked with hæmorrhage, without the emetic causing the loss of a drop of blood. What physician is ignorant of the cases published upon this subject by Stoll, Plenciz, &c.?

As to the remark which M. Portal makes concerning those apoplectics, who, he says, have died during the act of vomiting, and whose death he attributes to the emetic; I observe that he himself publishes in his writings some histories in which it appears that the patients have died immediately after bleeding, and that, so far from finding fault with the bleeding, he pretends, on the contrary, that he ought to have bled them *sooner and to a greater extent*; and that, when they died after taking an emetic, it is the emetic which, according to him, has killed the patient! This is at least defective logic. He maintains that bleeding is the proper remedy for apoplexy; and he relates cases in which it appears that

blood-letting has evidently killed the patients. On the other hand, he maintains that emetics are injurious, and we see, by his own cases, that all the patients to whom an emetic was given were saved, with the exception of the subject of his first case; and if, in this case, the emetic was not followed by its accustomed success, the reason undoubtedly was that it was associated with other remedies which, having a solvent property, as the alkalies and vesicatories, are injurious in the treatment of apoplexy, (as we shall see in the sequel,) and would tend to counteract the good effects of the emetic.

M. Portal ends his second memoir by the most terrible denouncements to apoplectics who will not be bled. He threatens them with *death, or with losing the use of all their limbs, or at least of some of them; with blindness, deafness or dumbness, or other equally serious accidents.**

Nevertheless, whilst maintaining that bleeding is the true remedy for apoplexy, he quotes no case of apoplexy which bleeding has cured; and he foresees that others, in following his precepts, will not be more fortunate in their practice than he who gives them.

“The congestion of blood, he says, may be such that the most abundant bleedings cannot remove it, but they are not the less indicated.”† The author here shows that the lessons of experience

* Page 227.

† Page 228.

are entirely lost upon him, since, whatever may be the consequences, he is not the less firmly wedded to his system. When the author has thus contradicted the doctrine generally received and professed by all eminent physicians, he may well feel embarrassed. Will he quote the numerous cases which destroy his system?—this is difficult. He must then examine them, refute them; this is more difficult still. The author pursues a better plan; he does not mention them, and publishes his own system, although it be annihilated even before it appears! It must be allowed, if M. Portal had acted thus, even in treating of the most trifling subject in literature, he would not be exempt from censure; but here he is concerned with human life; he is treating of one of the most difficult questions in medicine, and of a disease so serious, that the nature of the treatment often decides in a few hours the recovery or the loss of the patient! What is the benefit of our illustrious predecessors having enriched the art with the produce of their labours, if the fruits of them are to be lost to their successors? This rich inheritance is not our property, of which we are at liberty to make what use we please; it is a trust. These benefactors of humanity, by consecrating their lucubrations to its service, and transmitting to us their knowledge, have imposed upon us the duty of employing

them for the benefit of the suffering beings to whom they have consecrated them. This duty I am about to fulfil.

“ If we search,” wrote Rega in 1721, “ for the cause of soporose affections, we shall find it as often in the stomach, as that of vertigo which is the common precursor of them. Van-Helmont proves, by the symptoms which precede apoplexy, that it commonly arises from an overloaded state of stomach. Indeed, the languor, indisposition to exertion, loss of sleep, heaviness of the head, and oppression of the brain, which those at first complain of who are threatened with this disease, or rather which are the precursory signs of apoplexy, are generally produced by the stomach ; and certainly, if we examine all the circumstances attentively, if we consider the mode of attack, the occasional causes, and the remedies to which this serious malady very quickly yields, we cannot doubt but that foreign substances, overloading the stomach, determine a weight and oppression there, which occasion a similar affection of all other parts, particularly of the head ; and this is by no means surprising. Indeed, if the stomach, being pricked, contracted, irritated, or agitated with convulsions, irritates and convulses the whole nervous system, is it astonishing that this same stomach, being enfeebled and overpowered, brings the whole nervous system into the same state of



feebleness and exhaustion? Why should it be free in the latter case, since it is not so in the former?"*

Stoll affirms that he has seen more frequently severe affections of the head arise from the stomach and intestines, than from any idiopathic disease established in the brain.†

"It is now-a-days generally acknowledged," says Veegens, "that soporose affections have their source much more frequently in the abdominal viscera, especially the stomach, than physicians formerly supposed.

"We distinguish several species of these affections.

"It will be sufficient for us to quote the principal one, apoplexy, for an example, which, we shall see, most frequently arises from the stomach sympathetically, if we consider:

"1. That very often the manifest cause of fatal apoplexy is not found in the brain after death, as has been already observed by Baillou, Willis, Morgagni, and Casimir Medicus.

"2. That frequently causes of apoplexy are found after death, even when the patient had not been previously affected with apoplexy, and when it had nothing to do with the cause of death. Morgagni and Platner may be consulted.

* Rega, de Sympathiâ, p. 92. *Harlem.* 1721.

† Rat. Med. part ii. p. 63. *Lugd. Bat.*

“ 3. That this disease is frequently occasioned by poison, by luxury, by intemperance, and by continual drunkenness.

“ 4. That this disease often yields to emetics and purgatives.” *

“ What proves,” says Selle, “ that there are sympathetic apoplexies, is this: that often in apoplectic patients there has been found neither dilatation nor rupture of vessels, and that on the contrary considerable extravasations have been found which had not been followed by apoplexy.” †

I remark that the four cases related by M. Portal in his second memoir are as decisive for overturning his own doctrine, as for supporting the true one. Although Rega and Veegens admit the existence of inflammatory apoplexies, they nevertheless establish that the most frequent kind of apoplexy is a sympathetic affection deriving its source from the abdominal viscera, and prove it by examining the mode of invasion and the occasional causes which determine an attack of apoplexy, and by the remedies which subdue it. We see likewise, from the four cases related by M. Portal, that the four patients in question were given to good cheer, that they were attacked with apoplexy after a full meal, that an emetic was administered to them, and that they were cured ;

* Diderici Veegens, Diss. de Sympathiâ inter ventr. et cap. præcipuè in statu præternaturali, p. 306. 1784.

† Médecine clinique, trad. par M. Coray. 1787. T. 2, p. 40.

and inconceivable as it is, the light which M. Portal here presents to others serves not to enlighten himself!

By the observation of M. Lepecq, it appears that the apoplexies which prevailed at Rouen in 1770, did not arise from an idiopathic affection of the brain, but from humoral congestion. The five cases of apoplexy which he has published in his work prove that an eruginous, blackish bile, more or less abundant in quantity, always determined the attack of apoplexy, which yielded to the evacuation of the bilious humor; and the author makes the following reflection upon this subject: “How often have affections of the stomach, and convulsions produced by worms or other intestinal irritation, suddenly destroyed life, without the functions of the brain having previously been affected!” *

Schoenheider has published, in the Transactions of the Society of Medicine at Copenhagen, a case of apoplexy where the disease returned frequently, owing to great congestion of phlegm, and always yielded to the action of an emetic. The author says, he thus cured ten different times his patient, who was seventy years old.†

Sauvages, speaking of apoplexy, says, “after having taken a strong emetic dose, the patients

* Observations sur les Mal. épid. p. 194.

† Acta Soc. med. Haun. T. 1, p. 99.

sometimes open their eyes; and testify by actions or words that they feel pain in the stomach or bowels.” *

According to Charles Le Pois, the principal cause of apoplexy proceeds from other parts than the brain.†

Boursier de Kanilfeld says, “no one is ignorant that causes hidden in the stomach or bowels affect the brain so much as to occasion convulsions or delirium, and at other times drowsiness or lethargy; and that, when by the aid of purgatives the material cause is removed, or by other means corrected, the convulsions, the delirium, drowsiness or lethargy cease and are completely dispersed: why then may not similar causes, acting more forcibly and more frequently, engender apoplexy, without leaving any disorder in the brain visible to the eye of the dissector?” ‡

Schroeder demonstrates that the most frequent cause of apoplexy resides in the precordial region, and that emetics and purgatives are the remedies most generally indicated in the treatment of this disease. §

I am of opinion that these testimonies are more than sufficient to show, in opposition to the

* *Nosologie Méthodique*. 1771. T. 2, p. 357.

† *Car. Pisonis obs.* p. 95.

‡ *Instit. medic. pract.* Aut. Burs. de Kanilfeld, vol. 3, p. 89. *Lipsiæ*, 1787.

§ *Opusc. med.* vol. 2, p. 338.

doctrine of M. Portal, that the greatest number of apoplexies arise from a cause established in the abdominal region, and that, consequently, the greatest number of apoplexies do not require the administration of blood-letting.

But my task is not finished. I propose actually to prove that there is no such disease as sanguineous apoplexy, and that bleeding is always prejudicial in the treatment of apoplexy. Here, I travel without a guide; no author has yet professed this doctrine; happy shall I be if, in explaining it according to my view, and as it has been revealed to me at the bedside of the patient, I succeed in eradicating a dangerous error which has been introduced into the healing art, and in enriching it with a novel truth.

Let us examine the dead bodies of patients who have died of apoplexy; and beginning with the brain, in which M. Portal believes the cause of death from apoplexy is always seated, Morgagni assures us, from his own dissections and those of Varoli, that the brain of apoplectics does not contain a larger quantity of excremental parts than that of other dead bodies.*

Morgagni, who does not generally make use of repetition, repeats this assertion several times in his writings. It is strange that M. Portal should not have seen it; if he have read it, it is still more astonishing that he should have thought

* Morgagni, *Epist. Anat.* 4, art. 1.

himself authorised to overturn a doctrine universally received, because he has found certain diseased appearances in the *brain* of one apoplectic patient.

Morgagni appears to have foreseen and condemned beforehand the system of M. Portal, when he says: “I do not agree with those who, when they find water in the cranium of an apoplectic, think immediately that it has caused the disease.”*

“It is the common error,” says Lancisi, “of those who have no experience; when they find lymph in the cavities of the brain, they are in the habit of attributing the apoplexy to it as the cause, whilst commonly it is only the effect.”†

With respect to the water which is found in the cranium of apoplectics, Morgagni adds: “You are aware that authors assert that the ventricles of the brain always contain a little water, in the natural state; besides you see very clearly that the quantity of water cannot be greater than in hydrocephalus internus; and yet Vesalius states that he has found in a child two years old, affected with this disease, about nine pints of water; he adds that the child preserved its senses to the last moment; that it had, it is true, extreme weakness in the limbs, but that they were not paralysed. Besides this,” continues Morgagni, “you well know, from a number of dissections

* Id. eod. loc.

† Opér. t. i. l. i. c. 7, § 3, p. 7.

described by Bonnet in his work, entitled *Le Cimetière anatomique*, that tumors have been found in the cranium which had not been followed by apoplexy. But I have myself seen, as I have before noticed in my journal, an anormal increase of bony substance in three bones of the cranium, which presented a considerable protuberance inwards and compressed the brain, without this compression having produced either apoplexy or any other disease." *

"I opened," says M. Thiéry, "fifteen bodies of persons from sixty to ninety years of age. The vessels of the head were very full; four times I found polypous concretions in the longitudinal and lateral sinuses; in others the ventricles of the brain were filled with serum; such are exactly the appearances I have met with, in the same proportion, in persons destroyed by apoplexy: these however had died without the slightest appearance of apoplexy. On the other hand, I have opened many bodies of persons who died suddenly from apoplexy, either on the third or fourth day after the attack, and have found only slight congestion of the vessels, without extravasation of any kind." †

Sauvages says, that, "when water is found in the sinuses of the brain, it is not therefore to be said that this serosity has been the cause of the

* Morgagni, Epist. anat. 4, n. 28 and 29, p. 61. *Lovani*, 1766.

† Med. expér. p. 142 and 143.

apoplexy. I have seen hydrocephalus to an enormous extent without apoplexy; several authors have made the same observation.” *

I think it unnecessary to notice every kind of extravasation that may take place in the cranium, since the statement of Morgagni, the result of numerous dissections, embraces all the disorders which the brain presents; and he asserts that they ought never to be considered as causes of apoplexy, whilst they are met with indifferently in patients who have died from apoplexy, and in those who have died from any other cause.

I shall observe, however, that extravasation of blood would prove the existence of sanguineous apoplexy less than extravasation of serum.

If the globules of the blood had as much tenuity, and were as fluid as the serous part, would not they escape with the latter, when it escapes? This is self-evident. If then the globules remain in the vessels, whilst the serum is extravasated, they remain there only on account of their greater consistence, and greater thickness; now this consistence and thickness of the blood are allied to the state which is called *inflammatory*. Sanguineous apoplexy, which is supposed to arise from this pretended inflammatory thickening of the blood, cannot therefore present the extravasation of blood spoken of, since its density opposes it; it is sufficient therefore to see blood extravasated

* Nosologie Méthodique, 1771. T. 2, p. 361.

in the brain to be certain that, if that extravasation is anything else than the effect of the disease, it does not, at all events, prove the existence of sanguineous apoplexy.

Let us return to Morgagni. He has collected, in his third letter, all the observations, eight in number, which he has himself made on sanguineous apoplexy. He could not ascertain any particulars relative to one of the subjects of these observations. As to the other seven, he remarks that two were advanced in years, two addicted to drinking, two had been for a long time exposed to the sun, and that the body of the last had preserved its heat a long time after death; and I observe that old age, the abuse of spirituous liquors, long exposure to the heat of the sun, the warmth of the body remaining long after death, are all circumstances which announce, some as cause, others as effect, great *rarefaction* of the blood.

In speaking of the examination of the body of the advocate, which had proved to him *evidently* that he had died of sanguineous apoplexy, M. Portal says: "The heat of the body was so great twenty-four hours after death, that I thought it right to defer the examination till the following day: however, I scarified the soles of the feet, and there flowed about two spoonfuls of very red and liquid blood." *

* Mém. sur plusieurs Mal. par A. Portal, 1800. T. 1, p 283.

In another of his works, M. Portal expresses himself as follows: “ In the bodies of apoplectics the warmth is preserved a very long time. We have some striking examples of what I advance. I shall quote, amongst others, that of a person who died suddenly in 1784, and who was kept a long time before being buried, because his body was very warm. The public papers, not long ago, made mention of a somewhat similar occurrence which happened at Vienna. Lastly, authors relate various cases which prove that the bodies of persons who die of apoplexy, or who have been killed by mephitic vapours, preserve their warmth for a long time.” *

M. Portal, in verifying the fact of the fluidity of the blood, and of the bodies of apoplectics retaining their warmth long after death, proves thereby that the blood of apoplectics is very rarefied.

The state in which the fluids are observed in a drunken man, may serve also to discover the state of the fluids in a person affected with apoplexy; both present the same phenomena; profound drowsiness, stertorous breathing, countenance extremely full of colour, the animal functions almost entirely suspended; so that one might call drunkenness *a temporary apoplexy*. Yet the blood of a drunken man is neither increased in quantity nor inflamed; it undergoes only an increase in volume.

* Observations sur les Effets des Vapeurs méphitiques dans l'Homme, &c., par A. Portal, 1787. pp. 8, 9.

“It is the property,” says De Haen, “of the spirituous portion of wine to rarefy the blood.” *

Now, what is rarefaction of the blood? It takes place whenever a certain quantity of caloric is interposed between the principles that constitute the mass of the blood; that is to say, a determinate quantity of blood contains then less of those principles than it contained before in the same volume; or in other words, it is less substantial, it is impoverished. Now what effect has bleeding in this case? does it remedy this impoverishment of the blood? The ferment which attenuates it, which begins to dissolve it, and thus causes it to expand and dilate the vessels;—this ferment, which, when become more acrimonious, dissolves the blood entirely, corrodes the vessels, and thus occasions extravasation; for such is, according to my own view, the etiology of apoplexy;—this ferment, I say, is it neutralized by bleeding? No; you diminish the quantity of the blood, but do not change its quality: before the bleeding, it fermented, it boiled, distended the vessels, and became extravasated; after the bleeding, it will ferment, boil, still distend the vessels, and be extravasated.

From the dissolved state of the blood of apoplectics is derived the whole theory of apoplexy. To say that the blood is dissolved or rarefied, which is the same thing, is to say that the constituent

* Rat. med. t. 2, p. 134.

principles of this fluid have lost the force of cohesion which united them; from that time they exert only a feeble action upon the heart. The latter, not sufficiently stimulated, reacts feebly in its turn; hence the slowness of the pulse. This is why Hippocrates * drew a favourable prognosis from the fever which arose in apoplectic patients, which is nothing more than an indication of the reaction of the vital powers. The loss of energy which these experience disables them from projecting with vigour the blood into the vessels of the brain; whence follows paralysis of that organ, and loss of motion and sensation, in which apoplexy consists.

That which occasions this rarefaction of the blood, is that kind of apoplexy which has hitherto been thought quite distinct from sanguineous apoplexy, (but which does not as we shall see differ from it at all,) termed *sympathetic*, *serous*, or *pituitous*.

It is called *sympathetic*, because the material cause is not seated in the brain.

Serous or *pituitous*, because the primary cause consists of an acrid ferment † which, being introduced by the primæ viæ into the current of

* Hic intra septem dies, nisi eum febris corripuerit, interit; Si namque corripuerit, convalescit. Lib. i. de Morb. cap. 2. Charter, t. 7, p. 552.

† Si humor acri qualitate lædat, apoplexiam facit. Notat. in Hipp. p. 55. 1652.

the circulation, exalts the mass of blood, and causes it to be extravasated ; and as this extravasation is attributed to a superabundance of blood, it is supposed that nothing is more beneficial than to take some away.

A comparison will make us sensible of the injurious effects of this practice. Those who have seen coffee boiled, must have observed that when it boils too fast, it runs over. What do you do then ? Do you pour some out of the vessel ? No, you add some cold water to it ; and in proportion as you pour a more condensed fluid upon one which is less so, the equilibrium is restored in both ; the more rarefied one becomes denser and no longer runs over, although its mass be augmented ; whilst, if the liquid were left under the influence of the cause which rarefies it, you might throw it out in vain, you would not prevent its running over, until there was scarcely any remaining.

This is an exact representation of the effects which bleeding produces in apoplexy ; the blood is in a state of ebullition ; it is drawn away ; the ebullition increases until there remains scarcely any more blood in the body ; and then life is extinguished.

The extreme state of expansion in which the blood of apoplectics is found, shows that, if it were as easy to introduce blood into the vessels of the human body as to draw it away, it would

be better to increase the mass than to lessen it. It is not therefore surprising that the contrary practice occasions death. Such an effect is the necessary consequence of such treatment.

A thorough examination of the essential character of apoplexy is sufficient, I take upon me to say, to prove this assertion ; but we shall see by and bye that facts prove it still better.

Let us here recal a passage of Van-Swieten. He says, in speaking of pituitous apoplexy, “Celsus has prudently advised, with respect to bleeding, that we should carefully examine the nature of the disease, in order to convince ourselves whether the blood be in excess or defective (*en défaut.*) Certainly, in this case, there is a deficiency of blood and not an excess, therefore we ought not to discharge it.” *

We see from the phenomenon which sanguineous apoplexy always presents, that the passage from Van-Swieten is particularly applicable to it. Deficiency of blood, and rarefaction of blood, are synonymous expressions. Pituitous is confounded then with sanguineous apoplexy : these two kinds are but the same ; in both there is diminution of the mass of blood ; and it may be said of each indiscriminately, “Certainly in this case, the blood is deficient and not in excess, therefore we ought not to discharge it.”

* Comm. in Boerh. Aph. T. 3, p. 299, in 4to. *Paris.*

It is this diminution of the mass of blood which gives rise, as I have already observed, to its slower circulation and to drowsiness. The proof that diminution of the mass of the blood slackens its course is drawn from the experiments of M. Haller, who has seen, it is true, the course of the blood accelerated in the very act of blood-letting; but who has also seen, after the bleeding, the circulation become slower than it was before the bleeding.*

As to drowsiness, we shall be convinced that blood-letting sometimes causes it, if we read the observation of Galen, in which it appears that a patient bled almost to fainting fell into a state of lethargy so profound that great difficulty was experienced in restoring him.†

The case of M. Bertrand, related by M. Portal, ‡ a case of Bang, one of Wepfer, several of Bordeu, which I am about to relate here, prove that blood-letting is a cause of apoplexy.

“A man aged forty years,” says Bang, “subject to inflammatory colic, experienced five days ago, an attack of it accompanied with constipation and a quick tense pulse. He had already taken cathartic pills. *Seven bleedings* and camphorated

* Mémoires sur le Mouvement du Sang et sur les Effets de la Saignée, par M. de Haller, p. 111. *Lausanne*, 1756.

† Gal. Oper. meth. Med. lib. 9, cap. 4.

‡ Mém. sur plusieurs Mal. t. 1, p. 284.

medicines not having relieved the abdominal affection, there came on, on the ninth day, *an attack of apoplexy*, which terminated the next day in death. On opening the body after death, we found one portion of the intestines inflamed, another portion gangrenous, the chest and head in a natural state.”*

Wepfer mentions a female more than sixty years of age, who gained her livelihood by cultivating the vine, and was in the habit of being often bled, as was the custom of the country where she lived; she was one day found dead at the foot of a vine.†

“A girl,” says Bordeu, “twenty years of age, of good constitution, complained of a little pain of the head, and had slight fever the day before the menses appeared. *She was bled from the arm, and ten hours after the bleeding, she fell into a kind of apoplexy*; I was summoned, and found the pulse rather bounding, but small, frequent, and very jerking (convulsif); *I ordered several bleedings from the foot with little success*; some drops of blood came from the nose, but *soon afterwards the patient died.*”‡

“A woman,” says the same author, “thirty years of age, who had not menstruated for three

* Selecta Diarii. Aut. Bang. t. 2, p. 44. *Haphniæ*, 1789.

† Jac. Wepferi. Hist. Apoplect. p. 10. 1724.

‡ Recherches sur le Pouls, p. 58.

months, became the subject of almost constant pain of the head ; she bled a little from the nose. *She was bled in the foot ; and two days after, she had an attack of convulsion nearly approaching to epilepsy, succeeded by a slight attack of apoplexy.* The patient recovered from this attack, and remained in a state of astonishment and wandering, during which she had a pulse rebounding at each pulsation, but very jerking. *She was bled in the foot ; and sometime after she had another attack, of which she died without having had any bleeding from the nose.*"*

The same author relates the history of an *old man subject to hemorrhoids*, and ends it thus : " It was not possible to re-establish the discharge from the piles, nor to supply it by a *great quantity of bleedings*, and other remedies which were speedily made use of ; the patient *died of apoplexy.*"†

It must here be remarked, that Galen's patient had fever, Bang's the colic ; that M. Portal's had had a fall ; that Wepfer could discover nothing in the case of the woman of whom he speaks, except that she walked with difficulty ; and that of Bordeu's three patients, one was but slightly indisposed, another had an habitual headache, and the third piles ; and that blood-letting having produced in patients affected with different diseases a similar effect, that is to say, either

* Recherches sur le Pouls, p. 59.

† Ib. p. 183.

lethargy or apoplexy, the natural consequence of these observations is, that blood-letting possesses a peculiar property of affecting the brain and of inducing soporose affections and apoplexy.

Either I am deceived, or there is nothing in this mode of reasoning which either invites distrust or justifies it: I offer no systematic explanation; I construct no hypothesis; I represent the pure and simple result of facts.

Now it is necessary to deny either the facts or the conclusion.

As to the facts, they are certain and incontestible; and they are not the only ones that I could have related; but the proofs which result from the observations I have quoted appear to me the more conclusive in favour of the proposition I seek to establish, since their authors, whilst collecting them, had no such proposition in view.

As regards the conclusion, any one may judge whether it follows from the facts, or whether it contradicts them.

From this it appears, how wrong those persons are who get bled at certain times in order to prevent an attack of apoplexy, since they employ, for the prevention of the malady they fear, the most appropriate means of hastening the attack; and, strange to say, when the accident happens, as happen it must, since everything has been done that is required to produce it, so far from ascribing it to the bleedings, it is attributed

to the patient being negligent of the repetition of them.

It seems to result from what I have already established, that bleeding, which diminishes the mass of the blood, slackens its course, and induces drowsiness, cannot be beneficial in a disease in which there is diminution of the mass of blood, slowness of circulation, and drowsiness. That if, in addition to this, it is proved that bleeding directly occasions apoplexy itself, bleeding cannot be the remedy for apoplexy; let us rather say that it is the most injurious means that can be employed in the treatment of apoplexy. Hence the reason of the mortality which appears connected with this disease: it is the treatment rather than the disease which destroys life.

I am even bold enough to add that, when once it is certain, by the testimony of observation, that the fluids of apoplectic patients are always in a rarefied state, persons the most ignorant of the healing art may decide the question now before us; for the signification of these words, *rarefaction of blood* and *blood-letting*, being understood by all the world, the slightest exercise of good sense will enable them to comprehend that subtracting blood in a disease characterized by impoverishment of the blood cannot be otherwise than injurious.

But why suppose, it will be asked, that apoplexy, which frequently attacks those who live

well, is characterized by impoverishment of the blood?

What! are you ignorant that the goodness and richness of the blood depend less upon the quantity and quality of the food, than upon the perfection of the digestive process; and that the tiller of the soil, whose food is simple and whose digestion is good, possesses blood of a better quality and more substantial, than the opulent man, whose digestion, always painful, always incomplete, produces only a badly elaborated chyle and vapid blood? Who does not know that those constitutions which are called *apoplectic* are generally remarkable for excessive embonpoint? And it is as well known that this excessive embonpoint is indicative of feebleness of the blood, and that the boldest partisans of blood-letting are very cautious in prescribing it to such patients, since they bear it much worse than thin persons.

To convince ourselves that bleeding cannot be otherwise than injurious in the treatment of apoplexy, it is necessary to consider the affinity existing between an attack of apoplexy and a paroxysm of apoplectic fever.

Now, a paroxysm of apoplectic fever is not inflammatory, because quinine cures it; and all practitioners are agreed that bleeding would be fatal.

If the paroxysm of apoplectic fever is not inflammatory, and if it be certain that bleeding is

injurious, it follows that an attack of apoplexy is likewise not inflammatory, and that bleeding in this disease is equally hurtful. For what reason? Because there is nothing but the intermission which distinguishes these two diseases from each other, and the different type of diseases does not constitute any essential difference between them.

Although, therefore, these two diseases may admit, in their treatment, some difference with reference to the varied type which they present, they can admit of none with reference to their material cause; that is to say, we cannot, without committing a serious error, treat apoplexy as an inflammatory disease, when it is evident that the apoplectic paroxysm is not an inflammatory disease.

Perhaps it will now be inquired how it is that blood-letting can inspire so much confidence in the treatment of apoplexy?

I think I can perceive the reason in the speedy but transient relief that blood-letting sometimes procures; for it does not always cause death suddenly in apoplectics, although it always does them harm. Morgagni relates several histories of persons affected with what has been called sanguineous apoplexy, who were at first relieved by bleeding, although, in the end, they fell a sacrifice to it.*

* De sed. et caus. morb. t. 1, pp. 20, 42. *Lovanii*, in 4to. 1766.

It was without doubt supposed that, when bleeding gave relief, there was a proof of its utility, and that the patients died only because the violence of the disease was superior to the efficacy of the remedy.

As to the reason of this momentary relief, I believe it is found also in the experiment of Haller already quoted, from which it appears that bleeding causes temporary acceleration of the pulse. The essential character of the disease consisting in the slackening of the circulation, a remedy which disturbs and accelerates it must procure some relief to the patient. But this relief is dearly purchased, since we have seen, by the same experiment of Haller, that the succeeding and lasting effect of bleeding is to retard the circulation of the blood which it at first accelerated, that is to say, to aggravate, in its last result, the essential cause of apoplexy.

The following has been offered as a correct theory of the disease. The blood being rarefied, whether it dilates the vessels, or whether it be extravasated, compresses the origin of the nerves; thence the suspension of sensation and motion. And thereupon it has been concluded, that if we draw away the blood, we shall set the nerves at liberty.

But these views, when applied at the bedside of patients, far from restoring them to health, have occasioned their death ; and it seems to me that it

were easy to foresee this fatal issue. Indeed, when blood is extravasated, how can we expect to make it re-enter the vessels, and to discharge it afterwards by opening other vessels? Bleeding is therefore injurious under this relation, because, without being effective for the purpose of removing the extravasated blood, it aggravates the cause of the extravasation. It is the same when there is only dilatation of the vessels, because that dilatation is occasioned by rarefaction, which is increased by blood-letting.

Moreover, in considering the treatment of diseases, it is necessary that all theories should be rendered subordinate to observation made at the bedside of the patient. Now we have seen what the sick bed teaches us upon this subject. We have seen that apoplectic patients treated by bleeding have died; and, on the contrary, that those to whom emetics have been administered have recovered; nothing more is necessary. All systems must bow to these supreme proofs, which are the positive voice of truth, because they are the expression of nature.

The emetic is the true remedy for apoplexy. This conclusion, founded on the true character of the disease, and on the grand rule taken *a juvenibus et lædentibus*, is sanctioned by the authority of Hippocrates.

Hippocrates, after having given an accurate idea of the disease, which he attributes neither

to superabundance nor inflammation of the blood, but to the irruption of vitiated humors upon the brain, very judiciously adapts the principal treatment to this view, and prescribes the patient being speedily made to vomit.*

However, truth will not allow me to forbear mentioning that Hippocrates, at the end of the chapter in which he offers this clear perception of the nature of the disease, and gives this wise direction for practice, in addition advises that the patient be bled in the tongue, if the vein can be found; but from the conditional expression he employs, it is implied that this view did not appear to him the principal indication to be fulfilled; whilst, after having fixed the cause of apoplexy in degeneration of the fluids, he twice repeats the advice to evacuate them, and prescribes first a glyster, and afterwards the juice of ferula, to evacuate the bile by vomiting and purging. Besides, although Hippocrates would have attached more importance to the bleeding which he here prescribes than it appears to deserve, it is for us, to whom numerous observations have proved the dangers of it, to make the authority of Hippocrates yield to that of experience. The first law of the physician is the safety of the patient.

It appears at first sight that vesicatories, being

* Hipp. t. 7, p. 585.—De Morbis, lib. 3, cap. 8. Charter.

of a stimulating nature, must be suitable in a comatose affection such as apoplexy; but it must be remembered that the observations of Tralles, Van-Swieten, Tissot, Quarin, &c., have proved that vesicatories produce a morbid alteration of the fluids which renders them injurious in malignant fevers; and that apoplexy being, like malignant fever, a disease of dissolution, the same motive which interdicts the employment of blisters in one of these diseases, will no more admit of their administration in the other.

As the cases above related are sufficient to convince us that practice creates more apoplexies than it finds, I have no reason to regret that my practice has not yet furnished any case of perfect apoplexy. I have treated, indeed, many patients affected with paralysis, a disease arising from the same cause as apoplexy. I have treated also many other patients, who manifested the premonitory symptoms of apoplexy, particularly a very perceptible impediment of speech, which is one of the least deceptive; but I have always been fortunate enough to avert the danger, by promptly employing an emetic; or purgatives, when the idiosyncrasy of the patients has not permitted me to prescribe the former; and I am quite convinced that apoplexy would have followed the symptoms which announced it, if I had employed blood-letting instead of combating the humoral congestion. I am therefore authorized to regard the

novel doctrine which I have published in this paper, as confirmed by my own experience.

When we consider what authors M. Portal quotes, and what the doctrine is which his writings breathe, we are tempted to believe that he has not kept pace with the progress which medicine has made, and that he was ignorant of the actual state of that science. One would say that his works were composed in the time of Boerhaave. The sanguinary doctrine of that author, which so many commendable observers who have succeeded him have much softened and modified, is reproduced, to its full extent, in the writings of M. Portal. He would cause the art to retrograde, if one could take him at his word. If we were willing to imitate his silence, we must forget the doctrines of Stoll, Grant, Huxham, Selle, Quarin, &c. But, as a recompense, we find in his writings the names of authors which are no longer read.

Thus in the preface of his *Anatomie Medicale* he highly eulogizes Capiivaccio. From such an eulogium of this author, I reproached myself for my negligence in not having read his work, and wished to repair it. But having found, in his directions for treating apoplectics, that it is necessary to bleed them, in the space of twelve hours, in the head, arm, and leg,* I desired to learn no

* *Tempore igitur accessionis, spatio duodecim horarum, tres venæ aperienter.* Hyeronimi Capiivaccii opera. *Frankofurti*, in fol. 1603. Cap. de Apoplexiâ, p. 527.

more. I closed the book, and saw at once, in such a doctrine, the reason of the loss of reputation which the author has suffered, and of the esteem which M. Portal retains for him.

It is useless to expatiate here upon the dangers of such treatment, which is not unlike the punishment inflicted by certain Roman emperors upon those whom they wished to put speedily to death. But I cannot comprehend how the man who has pursued such a plan of treatment, and who sees, as he must, that the patient dies, can believe that he dies of apoplexy, whilst it is clear that such treatment is calculated to kill the strongest man.

I am aware that M. Portal, to whom I bring in opposition both medicinal tradition and universal practice, may oppose the same to me; for although it is true, as I have already remarked, that with the exception of himself, and of a certain Nymann, an ancient writer, who composed a treatise on apoplexy sunk into profound oblivion, there is no other, at least to my knowledge, who has prescribed bleeding in all species of apoplexy; neither do I know any author who has interdicted blood-letting in every kind of apoplexy. We have each therefore our own practice to justify. Physicians will judge which of us has approached the nearest to truth. Without doubt their opinion will at first be, that sound practice consists in a proper medium, viz. in administering either bleeding or evacuants, according to the different kinds of apoplexy.

But I entreat them to consider that such is the actual practice, which destroys as often as it saves ; to consider well whether this moiety of unfortunate persons who die be not those on whom bleeding has been practised ; whether of *severe* and *slight* apoplexy, thus designated by Hippocrates, the severe does not acquire its severity by improper treatment ; and whether, so far from the aphorism being immutable in which he has pronounced that the former is incurable, all species of apoplexy might not yield to treatment, provided that treatment were adapted to the essential cause which generates them. Such at least is my opinion ; and I have given sufficient reasons in this essay to put to the last expedient those who will bring to the examination of this question the attention which its importance demands.

I finished this paper here when it was published for the first time, in March 1807. I will now add, that if blood-letting, under whatever form it is employed, be always injurious, as I think it is, never was there greater necessity for opposing it ; for never has the use of leeches been in so great repute in Paris as at the present moment.

At the same time it will appear how difficult it is to abolish this practice, if we consider that all physicians, with Hippocrates at their head, recognize the existence of inflammatory diseases, and the necessity of bleeding in the treatment of them.

But if such a class of diseases does not exist ; if until now one has been deceived upon this point, the antiquity of the error is not a title for maintaining it ; and the subject is sufficiently important to authorize a new examination.

I commenced by discussing the employment of blood-letting in apoplexy, because it has been constantly brought forward as one of the diseases which indispensably demand the administration of this mode of treatment. This opinion being generally diffused in Paris, where a physician of celebrity accredits it, I have thought it my duty to oppose it.

Have I done so with success ? I am not aware, at least, of any solid objection against the opinion which I have defended ; and M. Portal, who writes that the practice of physicians who prescribe emetics in apoplexy is murderous, has given no answer when I have shown that it is the bleeding, on the contrary, which he considers the only useful remedy in apoplexy, which is the murderer ; and have proved the dangerous nature of his practice by the very cases he has himself published. It is true, one does not see what he could have said in reply, since, in all that he has published on the subject, he has not presented a single reason in favour of his opinion ; and as amongst the practitioners known in our time not more than one physician can be named who adopts it.

M. Portal, not contented with having no regard for the testimony of the most respectable writers on medicine, had publicly accused physicians with being guilty of the grossest empiricism. Such a charge provoked recrimination, when directed without restriction against the whole body of physicians, which was always, I am bold to say, distinguished by learning and good manners. I have abstained from it. I have left to M. Portal the error of his proceedings, and have confined myself to the question I was treating of.

For opposing M. Portal, I have not limited myself to the doctrine of eminent physicians who condemn his. As these physicians, whilst establishing that most cases of apoplexy have their cause in the abdominal region, recognise however a small number of inflammatory apoplexies, I have examined whether there really be any such; and I believe I have helped to advance the science by demonstrating, from the state in which the fluids of apoplectic patients are found, that the inflammatory diathesis is foreign to the production of apoplexy.

I have shown how the humoral ferment, commencing in the *primæ viæ* and poured into the blood, separates its principles and thus weakens the elasticity which resulted from their union; and how the weakening impressed upon the mass of blood, and afterwards communicated to the grand organs which it supplies, produces that sudden

and entire prostration of strength which is the effect of the apoplectic stroke.

This new doctrine being confirmed by experience which attests the happy effects of the emetic and the injurious effects of blood-letting, is not wanting, I venture to say, in any of the conditions requisite for insuring it a place amongst the most irrefragable dogmas of the art.

The employment of the emetic in certain cases of apoplexy has been recognized, it is true ; but I have been the first to show that it is indicated in every case of apoplexy, because, I repeat it, the primary cause of this disease is always in the *primæ viæ*.

We extinguish a fire by throwing water upon it, or by scattering the matters which keep up the combustion. In this case, we cannot throw water on the fire, but we can disperse the matter which nourishes it ; and such is the effect of the emetic, which, without acting directly on the blood, does nevertheless compress its effervescence indirectly, by removing the humoral focus which produced it.

In treating a question of general interest, I have endeavoured to render it intelligible to all readers, and I believe there are few who cannot decide it. It reduces itself to this ; whether it be right to bleed a patient whose blood is impoverished.

But, will you say, I know not whether the blood of apoplectics be impoverished. You may learn it; I have laid before you the proofs of it. The writings even of M. Portal will furnish you with them. He there affirms that the dead bodies of apoplectics long preserve their warmth. It is true that Morgagni had made this observation before him; * but he states that he has read it in the public papers, and has seen the same thing in a capuchin: † I do not doubt it. However, the authority of Morgagni is sufficient. A fact is proved when he attests it. He relates other analogous cases, from which I have drawn the inference strictly arising from them; namely, that the blood of apoplectics is rarefied, that is to say dissolved, that is to say impoverished.

It cannot be denied that the question as it is presented in this paper, places every one in a position to resolve it. In two words, when the physician affirms that the blood of the patient is rarefied, the patient needs only common sense to know whether it be beneficial to him to lose or to preserve his blood.

But thus to profess a doctrine entirely opposed to that of M. Portal, and to refute his, is to attack

* Morgagni, de Sedibus et Causis morborum. 4to. *Lovanii*, 1766. t. 1, pp. 28 and 30.

† Observations sur les Effets des Vapeurs méphitiques dans l'Homme, &c. par Ant. Portal, 1787, pp. 8 and 9.

the reputation of a man who enjoys a considerable one. I had expressed the desire that I should be spared this miserable objection ; but it has not been granted. Well ! what do you mean when you bring forward the reputation of a man in order to justify his doctrine ? Do you pretend that if the influence of this reputation brought pernicious counsels to your own bed of sickness, it would not be necessary to avert this source of danger for the sake of preserving your life ?

He who defends a reputation which pure doctrine alone should defend, does not perceive that he pleads against himself, in favour of a tyrant whose victim he may one day become. Is the power inseparable from the practice of medicine anything else than a frightful tyranny, when it is not enlightened ?

Inexperience kills with zeal, almost with certainty, without pity and without remorse, because she thinks she is preserving our lives at the very time she is abridging them. The common interest therefore consists, not in maintaining such a formidable power in obscurity, but in enlightening it in proportion to its magnitude.

As for myself, if I support the cause of truth, it is for the life of patients that I strive. Now he who is occupied in endeavouring to preserve life and health, is engaged in promoting the happiness of mankind. Compared with these lofty considerations, of what weight can be the wounds of

self-love or its enjoyments? Of what consequence is it whether a reputation rise or fall, provided the result be advancement of science and relief for suffering humanity?

END OF THE ESSAY.

APPENDIX.

PAPER ON THE TREATMENT OF CERTAIN DISEASES OF THE BRAIN ;

PUBLISHED IN "THE LONDON MEDICAL GAZETTE,"

DECEMBER 25, 1840.

By E. COPEMAN, Esq., M.R.C.S.

THERE appears to have been of late a considerable though gradual change in the views of some eminent members of our profession, respecting the pathology and treatment of certain disorders of the brain and nervous system. The subject, it cannot be denied, is one of the greatest importance that can occupy the attention of the medical world ; and it seems desirable to place upon record any facts that may tend to elucidate the real nature, and proper treatment, of maladies so frequently terminating in death. For a long time it has been held that apoplectic and paralytic seizures are caused by pressure upon the brain or spinal marrow, or by organic and incurable disease of those nervous centres ; and this doctrine of congestion, and pressure from loaded vessels, or consequent serous effusions, has led to the almost indiscriminate practice of free blood-letting, as the most likely means of saving the patient. In my own limited experience I have several times observed that bleeding in

apoplectic and paralytic attacks has been followed by very unsatisfactory results; and the excellent remarks published by Drs. Holland, Griffin, and others, have convinced me that it is safe and right to employ other means of relief, and better not to rely upon the indiscriminate use of the lancet.

The following cases are offered under the idea that they may, in some slight degree, confirm this opinion, and contribute towards throwing light upon this very imperfectly understood branch of the science of medicine.

CASE I.

APOPLEXY OCCURRING THREE TIMES IN THE SAME INDIVIDUAL.

On the morning of the 18th of January, 1839, I was summoned in haste to a gentleman residing at a short distance from my house, who had been attacked with slight vertigo, and confusion of thought, whilst dressing. He was advanced in years, being upwards of seventy, and had spent great part of his life in India; he was low in stature, corpulent, and short in the neck. He had long been accustomed to high living, and had been the subject of chronic inflammation of the air passages. Not many months before the present attack I removed two polypi from the nose, and, until within a very short period, he had profuse muco-purulent discharge from one nostril.

I found him complaining of giddiness, and his conversation was incoherent—pulse excited, but not very full; tongue furred; slight pain in right temple. I immediately drew about sixteen ounces of blood from the arm, and administered purgative medicines. He was slightly relieved by the bleeding, but in the course of the day he almost lost the power of expressing himself, his memory

failed, and he was scarcely able to stand alone. I requested a consultation, and in the evening met an experienced practitioner from Norwich, who advised cupping: this was performed in his presence, and before many ounces of blood could be drawn, the patient had a convulsive start, became faint, and it was feared a paralytic seizure was at hand. The cupping was immediately discontinued, and he was removed to a warm bed. He took

Pil. Hyd., gr. v. at night, and had a blister applied behind each ear.

19th.—His mental faculties very much confused; quite unable to express himself intelligibly. Slept tolerably during the night; pulse languid; tongue furred; bowels open.

Capt. Haust. Salin. t. d.

20th.—In much the same state. He made frequent attempts to speak, and appeared to know what he wanted, but I could not make out a word. It seemed to me that he might be speaking Hindostanee, or some Indian language that he had been accustomed to in former days; but his lady, who had also lived in India, could not at all understand him.

Ordered a large blister to the nucha, and Haust. Salin. t. d.

21st.—Slept well. Pulse soft and languid; bowels acting. Has taken no food, except gruel and thin broth, at present.

Cont. Haust. Salin.

24th.—No particular alteration occurred till this morning, when he made me understand that he felt sick, and had pain in the forehead. He could not recollect the name of any thing or person—for instance, the name of

the gentleman who met me in consultation on the 18th—but he had some slight remembrance of the circumstance.

A blister to the temple. Blue pill and rhubarb at night. Draughts as before.

25th.—Pain removed from the forehead. Bowels free; tongue cleaner; pulse soft. More generous diet allowed.

It is not necessary to enter into all the details of this case; suffice it to say that as his general health improved he regained the power of language; the first indication of this which I observed, was his asking me, at one of my visits, for some water, in Latin; he could not then recollect the English name of it. He improved each day in this respect until he could speak tolerably well. His memory, however, remained feeble; his eyesight, particularly in the right eye, was imperfect, as if the retina were partially paralysed; and owing to this failure of sight, coupled with an incapability of directing his attention to any particular object for even a very short time, he found it impossible to write, or to attend to any business whatever. His hands also were tremulous, and the whole muscular system weak and unsteady, perhaps from not being sufficiently controlled by his debilitated brain.*

Several months elapsed before he appeared to be much stronger; but at length his eyesight was restored, and his faculties in general became more perfect. His digestive organs were kept in order by small doses of blue pill and rhubarb, and saline draughts. In July he left home on a visit of some weeks' duration to some friends

* Dr. Marshall Hall, in a memoir on the Nervous System, published in the twenty-second volume of the Medico-Chirurgical Transactions, observes that in cerebral paralysis the irritability of the muscular fibre becomes augmented for want of the application of the stimulus of volition; and that the cerebrum is the exhaustor, through its acts of volition, of the muscular irritability.

in a distant county ; and on his return might be said to have quite regained his usual state of health.

The impression, at the time, as to the nature of the attack, was, that it was a case of threatened apoplexy, mitigated by the early adoption of antiphlogistic measures ; that effusion had taken place, and that the gradual amendment in the patient's health was probably consensaneous with the absorption of the effused fluid, and consequent removal of pressure from the brain. From what I have witnessed in the subsequent attacks about to be related, I now believe it to have been nothing more than sympathetic functional disorder of the brain, from disturbance of the digestive organs ; and that the slow recovery was owing to the debility caused by abstraction of blood.

On the 5th of November, in the same year, my attendance was suddenly required by the same gentleman under the following circumstances :—About three hours after a heavy dinner, he appeared to his family to be a little confused in his speech, asking for the same things several times over, and then forgetting what he had said. I was quickly on the spot, and found his manner hurried and confused ; his tongue furred ; his pulse languid and feeble. His friends urgently requested me to bleed him, but, considering the state of the pulse, I recommended in preference a purgative dose of medicine, and with some difficulty persuaded them to allow the bleeding to be deferred for the present. He took directly a calomel powder and a strong senna draught. About half an hour afterwards I was again summoned in a great hurry : after having taken his medicine he had been assisted upstairs, but as soon as he had seated himself in his easy chair he groaned, and fell forwards insensible upon the ground. I found him lying on the floor in profound

apoplexy. Stertorous breathing; cold skin; face covered with cold perspiration; great insensibility; pulse very small and feeble; no convulsive movements. Some remarks were made reflecting upon my not having bled him on my first visit, inferring that if I had done so I might probably have prevented the fit; and in accordance with the wishes of the attendants I now opened a vein, but, as might be expected from the state of the pulse, not more than an ounce flowed. We then put his feet in hot water, applied strong hartshorn and aromatic vinegar to the nostrils, and endeavoured to make him swallow a little brandy and water, for I thought he was rapidly sinking, and would not live half an hour. The hartshorn at length caused a convulsive sigh, and by applying it most assiduously he was roused sufficiently to open his eyes, and raise his hand to his nose as if to prevent the further application of the stimulus; it was however persevered in, and shortly after he showed signs of returning consciousness; in a few minutes he became sick, and vomited the largest quantity of ingesta I ever saw rejected from the human stomach. The vomiting continued at intervals for a quarter of an hour, and roused him still more, so that he was able to recognise persons in the room, and to make inquiries as to what had been the matter; he said he felt very weak and ill, and we soon got him into a warm bed. An hour afterwards he was able to answer questions readily, and expressed himself extremely desirous of getting sleep. Gave a small quantity of brandy and water.

6th.—Slept comfortably in the night; pulse quiet; skin perspiring; tongue furred; no complaint of languor and sickness. Took blue pill and rhubarb and senna draught during the day, which acted freely on the bowels. Could bear but very little muscular exertion; breathing easy; slept frequently during the day.

7th.—Passed another good night, and awoke refreshed. Took a little tea and toast. No sickness nor headache.

Cont. Haust. Sennæ.

The next day he was down stairs, conversing cheerfully with his family; took gruel, meat-broth, and pudding. Kept bowels free with senna draughts. I continued to see him daily till the 12th, when he was so well that I discontinued my attendance. Ten days afterwards I called again, and found him remarkably well, able to walk about his grounds, and to take drives in his carriage without fatigue. No dimness of sight or paralytic affection occasioned by this attack.

On the 30th May, 1840, about eight o'clock in the morning, this gentleman had another fit. He was seized with giddiness as he was coming down stairs, and shortly after he fell back in his chair insensible, his head dropping forwards upon his chest, and his face covered with cold perspiration; breathing stertorous, with discharge of frothy saliva from the mouth; loss of muscular power in the limbs; skin rather cold; pulse languid and labouring. A very few minutes elapsed before I arrived, and his lady pressed me much to bleed him forthwith, having already prepared bandage, basin, &c. for the purpose; but my experience of his former attacks, and a knowledge of his having been at a dinner party the evening before, determined me not to bleed; and although the number of hours which had elapsed since food was taken seemed to point out that vomiting was not so likely to afford relief as in the second attack, which occurred soon after a meal, yet I resolved to empty the stomach; and having applied strong hartshorn to the nose to rouse him, managed to pour down his throat a draught of senna, containing a scruple of Ipecacuan powder. His feet were put in hot water. In about a quarter of an hour he

appeared gradually to regain his consciousness, and asked in a hurried manner whether he had been ill. He said he felt sick and must go to bed, but he was not allowed to move. He soon began to recognise his attendants, and asked them what was the matter. Whilst sensibility was thus returning, and before vomiting commenced, a curious phenomenon occurred. He was sitting with his head resting upon his hand, and his elbow supported by the arm of the chair; and whilst in this position he had frequent twitches of the trapezius muscle, pulling the head towards the shoulder. I observed at the same time similar convulsive movements, synchronous with the former, of the rectus externus oculi, turning the eye towards the outer canthus.* After he had vomited, these twitches ceased, and the powers of the brain seemed much restored: he vomited a second time, and then appeared perfectly sensible of every thing that was passing; breathing became natural; took some aperient pills and senna draught, and lay in a recumbent posture on a sofa. The medicine soon acted powerfully upon the bowels, and in a few hours he was sufficiently recovered to read a letter written in a rather illegible hand. In a few days he was quite well, and has remained in good health to the present time.

CASE II.

HEMIPLEGIA CURED WITHOUT BLEEDING.

Mrs. S., a farmer's wife, æt. fifty-eight years, thin, but active and industrious, experienced a numbness in her

* This occurred during nausea, and before the brain had regained its natural powers. Was it not produced by the state of the stomach influencing the spinal accessory, and the sixth nerve, through the medium of the par vagum and great sympathetic? It ceased as soon as the brain recovered, and the equilibrium of the nervous system was restored.

left hand whilst preparing dinner for her family, which prevented her holding what she was using at the time. This occurred about noon, on the 23rd of January, 1840, and was quickly followed by darting pains in the right temple. Feeling very unwell, she managed to get up stairs into her bed-room, and almost immediately lost her speech and the use of the left leg and arm. She had for some weeks previously felt occasional pain and numbness in the left forearm, which she considered to be rheumatism, and scarcely worthy of notice. I saw her at 3 P.M. and found her sitting in a large easy chair, with the following symptoms:—left cheek partially paralysed, and mouth drawn to the opposite side; articulation very imperfect; pain in right temple, but less severe than at first; left arm hanging by her side quite powerless; left leg imperfect in its movements, but not quite paralysed; pulse feeble and indistinct; skin cool, with a tendency to shivering; nausea, and a sensation of faintness. Before I saw her she had swallowed with difficulty a little wine and water, and felt the better for it. The first question was, “Won’t you bleed her as soon as possible?” I did not feel disposed to accede to this; but, from the depressed state of the system and cold surface, in preference administered a little more warm wine and water, and got her into a warm bed, with the head and shoulders a good deal raised.

Applic. Empl. Lyttæ Ampl. Nuchæ.

℞ Magn. Sulph. ʒvj.; Inf. Sennæ, ʒvj.; Dec. Aloes, c. ʒij.; Tr. Jalap c. ʒij.; Tr. Hyos. ʒj.; Syr. Rhamni, ʒss. M. cochl. larg. iij. 2dis horis donec alv. bene respond.

11 o’clock P.M.—Rather drowsy, but easily roused; breathing quite natural and easy; pulse 72, and soft;

skin warm ; speech less imperfect ; left leg less powerless ; pain in the forehead intermitting ; says she feels more comfortable in every respect ; blister drawing ; bowels not yet relieved.

Cont. Mist.

24th.—7 A.M. Slept quietly several times for about an hour, without dreaming ; had taken all the mixture, and swallowed the last dose without difficulty ; skin warm ; pulse 72 ; bowels acted powerfully three times ; vomited once ; can move the leg freely, and, to my astonishment, moves the forearm in the direction of flexion, extension, and rotation, to some considerable extent. I had intended to apply leeches to the right temple this morning, but the pain had so much abated that I postponed it for the present. Takes gruel, tea, and milk.

R Magn. Sulph. ʒss. ; Dec. Aloes, c. ; Inf. Sennæ, aa. ʒij. ; Tr. Hyos. ʒj. ; Aquæ, ʒij. M. Cochl. larg. ij. 4tis horis.

9 P.M.—Much inclined to sleep, but quite sensible and collected when awake ; pulse 60, regular, and soft ; skin moist ; can lift the left arm out of bed, and, when sitting up in bed, can raise her hand to the top of her head, but says the elbow feels heavy ; urine scanty.

Cont. Mist.

25th.—Found her dressed and sitting up in an easy chair ; can walk about the room, and move the arm almost without difficulty ; no vertigo ; pulse 72 ; bowels open ; no drowsiness ; very little distortion of the mouth.

26th.—Rather more pain in the temple, for which a blister was applied behind the ear.

Cont. Mist.

27th.—Blister drawn well, and pain in forehead re-

moved; tongue milky; complains of slight numbness at the ends of the fingers, and feels languid.

R Inf. Gentian; Dec. Aloes, c. aa. $\bar{\text{z}}\text{iv}$. M. Cochl. larg. ij. t. d. To take mutton broth with bread.

29th.—Improving; sits up several hours, and walks about the room.

Cont. Mist.

31st.—Complains of languor and faintness: tongue furred; pulse quiet.

R Quinæ Sulph. gr. viij.; Acid. Sulph. dil. $\bar{\text{z}}\text{ss}$.; Inf. Gentian, c. $\bar{\text{z}}\text{viiss}$.; Syr. Zingib. $\bar{\text{z}}\text{ss}$. M. Cochl. larg. ij. t. d.

Feb. 2nd.—Bowels not sufficiently relieved; ordered a wine glassful of the first aloetic mixture every morning; tongue covered with yellowish fur, but has proper taste, and relishes food; can move the limbs freely; no distortion of the mouth. To remove the fur from the tongue and improve the secretions, to take a small dose of blue pill and rhubarb every night, and continue the quinine mixture.

14th.—Tongue clean.

Sumat. Pil. noct. ter in hebdom. Cont. Quin.

Gets down stairs daily.

May 4th.—This patient has been gradually improving, and is now able to resume her duties as mistress of the family. The left arm is still weaker than the other, and will not bear prolonged exertion; but she can sew, &c. with considerable facility.

August.—Health good; takes no medicine but an occasional aperient.

CASE III.

John Took, æt. sixteen years, a strong farming lad, was taken suddenly ill after a club feast on the 6th of June, 1840. My assistant saw him at 10 P.M. He was alternately drowsy and delirious, and could not be made sensible of what passed around him. Pulse small; extremities cold; head and face hot and flushed. Ordered purgatives, and mustard poultices to the feet. Next morning more flushed in the face, and comatose, but pulse still very small and compressible. Could not be made to swallow his medicine; and was very boisterous when roused. This was the report given me by my assistant, who thought he ought to have bled him, but was afraid to do so from the state of the pulse. I recommended a large blister to the nape of the neck, and a purgative clyster. At night I went to see him, and found that after the blister had been on a few hours he fell asleep, and had remained quite quiet till about an hour before I arrived, when he became sensible, dressed himself, and said he did not recollect anything about being ill. When I saw him he was down stairs in a chair, and talked cheerfully and rationally. Skin warm, especially about the head; although he said if he went near the door he was inclined to become chilly. Pulse rather full. Drew about eight ounces of blood from the arm, and gave aperients. Next day much better; no disturbance about the head; bowels well relieved.

9th.—Out for a walk when called upon, his friends stating that he was quite well again.

CASE IV.

A young man was attacked on the 10th of June, 1840, with the following symptoms:—He had been

employed all the previous day and night serving customers with beer, &c. at a public house where a club feast had been held. He dined with the club, ate heartily, but did not drink much beer. Early in the morning he was employed to cart fagots, but felt unwell, and was sick before he began. After working a short time he was seized with pain in the back and the pit of the stomach, and was obliged to be carried home. A surgeon, who chanced to be near, bled him and gave him salts. I saw him about an hour after the bleeding: he was become very drowsy; face flushed; pulse round and soft; surface warm; breathing easy. Attendants said he had complained much less of pain since the bleeding; but when I roused him he complained of pain in his stomach. I requested him to rise up in bed, which he did very slowly, and with difficulty; but when up could make a full inspiration without pain. Fell into a dose again as soon as left to himself. I thought it possible that his drowsiness might be the consequence of fatigue, and therefore did not repeat the bleeding. In about two hours his father came to tell me he was quite insensible, and could not speak; was very hot, and frequently rolled his eyes about.

Ordered a large blister to the pit of the stomach, and senna and salts every three hours.

11th, A.M.—Still very drowsy, and difficult to rouse. Skin warm; pulse feeble. Warm bath, after which the bowels acted for the first time.

12th.—Sensorium much oppressed; eyes frequently half opened, turned upwards, and moved from side to side. Pulse large, and inclined to double beat: perspiration profuse about the head and face: bowels not open. Cut his hair off, and applied vinegar cloths to the head.

Roused him sufficiently to make him swallow half an ounce of castor oil, the taste of which greatly displeased him, and he afterwards complained of being sick.

Empl. Lyttæ Ampl. nuchæ. Mist. Sennæ 4tis horis.

13th.—Answers questions much more readily than yesterday, and says he is quite free from pain. Blister drawn well. Head cool, still covered with wet cloths: pulse 72, regular. Still doses when left alone. Bowels not open.

Adhib. Enema. Pil. purgant. ij. 4tis horis.

15th.—Bowels well relieved. Convalescent.

CASE V.

Mrs. W., æt. fifty-eight, a lady of nervous temperament, and rather full habit, the mother of a large family, was seized, whilst at work in her garden, on the evening of the 14th of June, 1838, with numbness and loss of power in her left leg, which, after a few minutes, increased so as to oblige her to fall to the ground. The day was warm, and she had exerted herself sufficiently to cause profuse perspiration. With a little assistance she was soon sufficiently recovered to walk into her house, and upstairs to bed; but on the following morning, finding that the numbness of the limb remained, she requested my attendance. Two rhubarb pills had been taken, and had acted freely on the bowels.

I found her in a state of high nervous excitement, with partial paralysis of the left arm and leg; the left side of the face was also slightly affected. Pulse frequent and jerking; tongue rather foul: no pain in the head, or intolerance of light. Ordered a composing draught, and

saw her again in a few hours. No headache: pulse steadier, but full. Limbs in same state.

Venæsectio ad $\bar{3}xvj.$; and small doses of calomel and opium every four hours.

16th, 10 A.M.—Complete paralysis of the left side; but no headache, or symptoms of inflamed brain. Skin perspiring: sensation in the affected limbs perfect: complains of sickness.

8 P.M. More nervous excitement, and pulse jerking.

Slight power of closing the fingers of the left hand. Had some sleep since the morning. Her son, a medical practitioner, came to see her, and advised more bleeding.

V. S. ad $\bar{3}xvj.$ Sumat. Calom. gr. j.; Extr. Col. c. gr. iv. 4tis horis.

17th.—No amendment in the state of the limbs; left side of the face paralyzed; pulse quiet; bowels not open.

Haust. Sennæ 4tis horis.

Stomach irritable, but very little vomiting.

P.M.—Bowels acting freely, and has had some sleep.

18th.—Bowels very open; more depression than yesterday; no return of power in the paralyzed parts.

Applic. Empl. Lyttæ Nuchæ.

19th.—Bowels acted freely in the night. Strong mercurial fœtor in the breath, and ulceration of the lining membrane of the mouth.

Omit Pil. et utat. Garg. Chlor. Calcis.

22nd.—Has taken a little meat broth, and enjoyed it; no power in the paralyzed limbs; got some comfortable sleep in the night.

25th.—Mouth still sore; bowels act daily without medicine; appetite improved; takes milk and meat broth.

28th.—Can move the thumb and fore-finger of the left hand, and draw the leg a little up in the bed.

30th.—General health improving; more movement in the fingers of the left hand; takes meat broth freely.

Nothing more of importance occurred for some time. As the general health improved, the state of the limbs improved also; and in course of time the patient could walk across the room with little assistance, and could use the forearm sufficiently to amuse herself with knitting. She paid great attention to diet, and rode out frequently in her carriage.

On the 9th of December, 1838, I was called in again, on account of pain and of heaviness in the head. Tongue furred; appetite failing; occasional chills followed by heat; bowels not so much open as usual; pulse excited, beating 120 in a minute; no giddiness; no tinnitus.

R Magn. Sulph. ʒss.; Inf. Sennæ, Dec. Aloes, c. aa.
 ʒij. M. 4ta. part 4tis horis. Pediluvium.

10th.—Bowels well relieved; head better; pulse 108 in the morning, 98 in the evening; no alteration in the state of the limbs.

Cont. Mist.

11th.—Head still uncomfortable from heaviness, but not painful; pulse 96.

Cont. Med. et applic. Hirud. iij. pone utramque aurem.

12th.—Head better; pulse 90; bowels relaxed; tongue cleaner.

Applic. Hirud. iij. pone utr. aurem; Cont. Mist.

14th.—No uneasy sensation in the head. No further treatment required at present.

Several times during the next year this lady had attacks of nervous excitement and disordered stomach, and was

occasionally bled to the amount of a few ounces, which generally afforded temporary relief; but the state of the limbs remained much as usual until the 6th of December, 1839, when, after having ascended a steep flight of steps, chiefly by her own exertions, she suddenly perceived a difficulty in speaking, and in a few minutes her articulation became very imperfect, and the paralytic limbs more feeble than before. Pulse frequent and jerking; mouth more drawn to one side. She was bled to eight or nine ounces, and took senna draughts. In the evening she felt better, and the bowels had acted freely. The blood was remarkably tenacious and sizzly, and adhered to the fingers like glue.*

This attack was followed by more debility both of body and mind. When depressed more than usual, Spirits of Ammonia and Camphor mixture afforded relief, and a light bitter tonic was prescribed for general use.

In May 1840, the mental powers of my patient were much diminished, and her memory much impaired. There was an appearance of languor and listlessness which I had not seen in so great a degree before, but I ascertained from the family that it had been gradually increasing for several months, and they all observed how much she was altering for the worse.

On the 18th of June last this lady and her family were thrown into the greatest affliction by the sudden death of her husband. He was devotedly attached to his family, and equally beloved by them: he had been her constant attendant and nurse ever since the commencement of her illness, and died in the act of dragging her about in a small hand carriage. It was impossible to anticipate the effect such a severe shock would have upon her in her debilitated condition, but I feared it would be more than

* Boerhaave mentions a thick glutinous blood as a cause of apoplexy.

she could bear, and that she would sink under it. The immediate effect was to stupify her; she sat by the corpse unmoved, and could not be made to believe that he was really dead. She witnessed the sorrow and distress of her children, but gave vent to no expression of feeling herself for many hours. She gradually, however, became convinced of the melancholy truth, and, strange to say, has since considerably rallied from her previous state of mental inactivity, and is now altogether better than she had been for months. She appears to feel that she is now required to make more exertion, and has, to a certain extent, been wonderfully enabled to do so.

From the cases above narrated, and from others of a similar nature, I have been led to draw the following inferences:—

1. That apoplectic and paralytic affections may take place in an extreme degree without organic disease of the brain.

2. That they often occur from other causes than pressure on the brain.

3. That bleeding, so far from being always necessary, is in many instances prejudicial.

4. That the effort of vomiting is not so prejudicial in these diseases as is generally supposed.

5. That counter-irritation, both external and internal, is a valuable means of affording relief to the symptoms immediately succeeding the attack.

1. *Apoplectic and paralytic affections may be severe without there being organic disease of the brain.*

In case 1, the first attack seemed to be the result of effusion and pressure on the brain; but it is clear that the 2nd and 3rd attacks, although much more severe at the

commencement, could not have depended upon such a cause, or recovery would not have been so rapid and perfect. It is probable, therefore, that the first as well as the others arose from disorder of function, and not from organic disease. For the same reasons, the case of Hemiplegia (No. 2) must have arisen from functional disturbance of the brain, and not from effusion of blood or serum.

“I have met with many instances in which it has been proved that not only a general derangement of the functions of the nervous system producing apoplexy, but also partial effects of a similar nature, causing hemiplegia and paralysis, may take place, without any visible change of structure in the brain.”—*Abernethy on Local Diseases*.

2. *These diseases often occur from other causes than compression of the brain.*

In the second attack, case 1, what are generally considered symptoms of compression were very marked; but had pressure been the cause of them, how could recovery have taken place so rapidly, and relief have been afforded immediately on the stomach rejecting its contents? This leads me to make a few remarks on the effects of pressure on the brain. I have often witnessed pressure on the brain from external violence without the symptoms attributed to compression. In the 18th volume of the Medical Gazette, a remarkable case is reported by Mr. Johnson, where a boy presented himself at the Norfolk and Norwich hospital with the thick part or screw of the breech-pin of a gun firmly impacted in the frontal bone, the part which fastens on the stock projecting like a horn. The patient had no symptoms of compression till the pressure was removed by the extraction of the foreign body. In the same report are two

other cases of fracture of the skull with depression to the extent of the thickness of the cranium, without symptoms of compression.

A little boy in my neighbourhood fell from a horse, receiving a severe wound in the forehead, and another at the back part of the head, where the cranium was fractured and depressed to the extent of the thickness of the bone. He was stunned by the blow at first, but soon recovered, without symptoms of compression, and without the depressed portion of bone being raised. He now enjoys good health, the pressure on the brain still remaining.

A child was affected with congenital hydrocephalus; the head gradually enlarged, until, at the age of eight months, it had attained the following dimensions, viz.:—Circumference, $24\frac{1}{2}$ inches; from ear to ear over the top of the head, $15\frac{1}{4}$ inches; width between the frontal protuberances, $4\frac{1}{4}$ inches.

At the age of thirteen months the size of the head was as follows:—Circumference, 26 inches; from ear to ear over the top of the head, 18 inches.

During the whole period referred to, this child had never been really ill. The appetite was good, and its senses unimpaired. Bowels were regular and healthy, and at the age of seven months had cut two teeth without difficulty. At the time of the last measurement of the head, I find the following report in my case-book:—“The child is much the same as to general health, its faculties are still tolerably perfect, its temper is cheerful and it knows its attendants perfectly well. The body is more emaciated. About a week after this the child died suddenly with slight convulsions, but had not previously been worse than usual.”

It is thus beyond a question that pressure upon the

brain may exist to a greater extent than can be imagined to occur from loaded blood-vessels, without apoplectic or paralytic symptoms being produced. Compression is not the only cause capable of producing those symptoms, and I am inclined to believe that such a cause does not exist in a majority of the cases of apoplexy that present themselves.

3. *Bleeding, so far from being always necessary, is in many instances prejudicial.*

I am much inclined to the opinion that apoplectic and paralytic seizures are frequently diseases of debility, especially in persons advanced in years; and that the brain does not well bear detraction of blood in addition to the shock of the attack.

Celsus says, “Si omnia membra vehementer resoluta sunt, sanguinis detractio vel occidit, vel liberat;” and again, “Post sanguinis missionem, si non redit et motus et mens, nihil spei superest.”

Hippocrates says that bleeding, except it relieves, kills. Boerhaave mentions a *cold phlegmatic* cause of apoplexy. Galen says, “Paralyticorum parvus pulsus, languidus, tardusque est. Nonnullis rarus quoque, aliis creber, sed nonnihil inordinatè intermittens. Est enim parvus et tardus, *quia morbus est frigidus*: languidus quòd *facultas infirmior*. Comitialium et attonitorum pulsus sunt similes.” “Quorum trium morborum, frigidus, crassusque, aut omnino viscidus humor est causa.”

In all cases of apoplexy or paralysis, in which the cause is dubious, “and such, on the first examination of them, the majority of them will probably be, it seems right to try the effect of correcting disorder of the digestive organs, with a view to alleviate nervous irritation, before we proceed to those severer methods, which the

belief of the existence of organic or vascular disease in the brain would induce us to institute. For if blood-letting and counter-irritation be employed, in order to diminish vascular action; or if mercury be used to some extent, in order to induce the absorption of deposited substance; these measures must aggravate that disorder of the general health, upon which, in many instances, the nervous affection depends."—*Abernethy on Local Diseases*.

In the first attack, case 1, bleeding was carried to some extent, and the recovery was very tedious, a diminution in the functions of the nervous system remaining for a considerable time. In the 2nd and 3rd attacks, in which bleeding was not resorted to, the recovery was rapid and complete.

In the case of hemiplegia (case 2) the patient was several times in the course of her illness affected with symptoms indicating debility, which were relieved by tonics; and I am much inclined to think, if bleeding had been practised, the cure would have been more tedious and less perfect.

In case 5, in which bleeding was several times resorted to, the paralysis has become permanent, and frequently the general powers of the body have declined. The excitement caused by the heavy loss the patient sustained in the death of her husband, has produced amendment in her condition.

In case 4, in a young subject, bleeding was followed by coma, but whether as a consequence or not I cannot pretend to determine, as I did not see the state of the patient before he was bled. I merely record the fact. In case 3, the boy had recovered from the symptoms of disordered brain *before he was bled*, although probably according to the general opinion he was in circumstances especially demanding abstraction of blood.

4. *The effort of vomiting is not so injurious in these diseases as is generally supposed.*

The 2nd and 3rd attacks in case 1, were very much benefited by it, and no prejudicial effect followed.

5. *Counter-irritation, external and internal, is a valuable means of affording relief to the symptoms immediately succeeding the attack.*

By *internal counter-irritation*, I mean irritation produced through the medium of the stomach and bowels, by emetics, purgatives, or nauseating medicines. I well remember, during my apprenticeship, being sent to visit a poor woman in Norwich, who had been taken in a fit. I found her apoplectic; and owing to a suspicion of her symptoms having been occasioned by taking laudanum, (which however was afterwards proved to have been unfounded,) a fellow pupil and myself proceeded to empty her stomach by means of the stomach-pump. The stimulus caused by the introduction of the tube, and injection of water into the stomach, roused her from her state of insensibility, and she quickly recovered. As a proof of the occasional good effects of external counter-irritation, in addition to what appears from the cases above recorded, I shall briefly refer to a circumstance which occurred at the Norfolk and Norwich hospital, during my residence in that institution. A man who had been the subject of general dropsy, and in a very weak condition, became insensible, and had all the symptoms of serous apoplexy. No bleeding could be practised on account of the debility present; neither, to the best of my recollection, could he be made to swallow anything. The physician under whose care he was placed, ordered blisters to be applied in succession, I might say, almost

all over the body. On the back of the neck, on both arms, both thighs and legs, soles of the feet, and I think on the top of the head. In two or three days the patient regained his senses, and recovered from his apoplexy.

A question of great importance remains to be discussed, namely, whether there are symptoms generally present in cases of apoplexy and paralysis, which, by strict observation, may enable us to distinguish clearly between those which require bleeding, and those which would be better treated without it. I frankly confess my inability to answer it satisfactorily, and find that others have also failed in doing so. If I may be allowed to give an opinion, I should say that bleeding is unnecessary or prejudicial where the patient is sixty years of age or upwards; where the pulse is feeble, very frequent, intermitting, slow, or large, and inclined to double beat, (I have always found a pulse with double beat indicative of a state of system best relieved by diffusible stimuli,) where the respiration is laboured and accompanied with *cold* perspiration; where there is great mobility of the nervous system with weak muscles, whether the body be thin or *corpulent*; when the attack comes on soon after a full meal, or after great bodily or mental fatigue.

A quick, wiry, resisting pulse, flushed countenance, warm perspiration, noisy breathing, and a tendency to spasmodic muscular contraction, occurring in persons of an earlier age, seem to point out a necessity for resorting to abstraction of blood; but I believe there will be less danger in not bleeding in any case, than in always having recourse to it, where there are *some* circumstances indicative of the propriety of its employment.

I am fully aware that the observations that I have offered upon this most interesting subject are very imperfect, and, from my limited experience, cannot be

conclusive either as regards the nature or the treatment of the diseases under consideration. My own mind, however, is strongly impressed with the truth of the inferences I have drawn, in opposition to the more prevailing opinions of the day. If they be correct, I shall be glad to find them confirmed by those who, from more extended experience, can form a better judgment; and if erroneous, I trust I may, from the same source, receive such instruction as may enable me to treat in the most effectual and best manner, those cases that may in future be submitted to my charge.

SECOND PAPER

ON DISEASES OF THE BRAIN;

By E. COPEMAN, Esq., M.R.C.S.

PUBLISHED IN "THE LONDON MEDICAL GAZETTE,"

OCTOBER, 1842.

IN the number of the LONDON MEDICAL GAZETTE for Dec. 25, 1840, I published a paper on the treatment of certain diseases of the brain, in which I ventured to express an opinion that the common method of treating apoplexy by large bleedings was injurious. From subsequent study and observation, I am still more convinced of the impropriety of the general practice, and feel assured there is a greater chance of restoring apoplectic patients by treating them according to the principles advocated in the paper alluded to. The first case there published was that of a gentleman upwards of seventy

years of age, who had suffered and recovered from three successive fits of apoplexy, the last occurring in May 1840. On the 3rd of February, 1841, this gentleman was again attacked with vertigo, followed by insensibility of at least half an hour's duration. He was roused a little with strong hartshorn, and made to swallow an ipecacuanha draught as formerly, which produced vomiting and a gradual return of sensibility. His bowels were afterwards kept free with senna draughts, and he recovered in a few days. On the 24th of Dec. in the same year, he was again attacked in a similar manner; but although the same means were effectual in removing the apoplectic symptoms, he was left weaker for a month or two than he was before his illness. I attended him again in May 1842, for a cold and sore throat, from which he soon recovered; and by the help of mild tonics and aperients he became as well as usual. On the 15th of June, 1842, I was called up early in the morning to see this patient, who had been suddenly attacked with loss of sensation in the cheek and limbs of the left side. He was sensible, although somewhat confused and alarmed. No pain or uneasiness in the head; pulse not very steady, and I discovered a hardness in the artery indicative of approaching ossification; no loss of motive power in the limbs. He took his usual emetic draught, but it did not act; afterwards, aperient medicine, keeping to his bed. By the use of these means, and rubbing the affected parts with strong liniment, sensation was restored perfectly in the shoulder, arm, and thigh; imperfectly in other parts. Power of moving the limbs perfect, and in a few days he was able to get down stairs. At the present time, the only parts in which the sensation is not perfectly restored are the left cheek and the left hand. He complains of this hand being generally cold and stiff,



although it is of equal temperature, and as perfect in its movements as the other. He is certainly more feeble, and generally feels languid and faint after breakfast, but he takes a dose of tonic medicine daily at eleven o'clock, and is pretty well during the rest of the day. A few days since, he complained of slight vertigo and double vision the morning after a journey of twenty-two miles, but rest and careful diet soon removed the symptoms.

Is not the case of this gentleman one of unusual occurrence, and full of instruction? Five attacks of apoplexy (some of no little severity), then one of anæsthesia, and the patient, although feeble, enjoying as much health as most men of his years! Can there be any doubt but that the only way to prolong his life is to support his nervous power? Can there be a doubt but that the usual treatment by bleeding would render his attacks fatal? And yet he is corpulent, short-necked, apoplectic-looking, with a good appetite, capacious stomach, and generally a good pulse.

CASE II.

Mrs. A., æt. 41, of exceedingly nervous temperament, and easily-excited circulation, stout, and scarcely ever taking exercise, was attacked in the morning of Friday, Nov. 20, 1840, with pain in the muscles of the neck and back of the head. Directly after a light dinner, eaten without appetite, she saw an unnatural brightness before her eyes, soon followed by loss of vision and numbness in the right side. She then lost the power of speech, the right leg and arm being cold and paralytic. I was soon on the spot, and found her sensible and making attempts to speak. The limbs were numb, and she was not able to close the hand. Pulse frequent but

compressible. I ordered her feet to be put into warm water, and the following draught.

R Inf. Sennæ ʒj. ; Magn. S. ʒij. ; Sp. Lav. c. Tr. Jalap.
aa. gtts. xxv.

At 10 P.M., she had vomited three times, and the bowels had acted once. She had regained the power of articulating and moving the limbs, but felt "very ill."

Empl. Lyttæ Nuchæ.

21st, 9 A.M.—Has had no sleep, and complains of soreness in the scalp. Limbs not paralytic; speech more perfect; pulse soft and rather frequent; tongue furred.

Ordered some purgative pills.

6 P.M.—Has been much griped by the pills, and vomited bilious matter twice; bowels acted once since morning; movements of the limbs all perfect; pulse soft; perspired freely after vomiting.

22nd.—Pain in the muscles of the head and neck, with great tenderness of scalp. Pulse 72, soft; tongue clean; no fever; no paralysis.

Fotus papav. t. d., and the following draught:—Tr.
Colch. gtts. xxv.; Tr. Hyos. gtts. xv.; Mist. Camph.
ʒj. m.

Bowels open.

26th.—Pain in left ear and side of head, superficial and lancinating. Fainted after fomentation, and felt very languid all the evening, but more free from pain: griping and nausea.

Omitt. Colch.

28th.—Better in all respects.

Opiate liniment to the scalp.

This patient soon recovered, without a return of paralytic symptoms.

During the present year (1841), this lady has experienced a similar attack of paralysis, which soon passed off under a similar mode of treatment. I had, some time before her first attack, attended her in an attack of hæmoptysis; and a year or two before, she had experienced a severe attack (as I am told) of inflammation of the bowels; which circumstances would probably have been considered indicative of a too active circulation, and have led to bleeding as a proper means of treating the paralytic attack: but I have reason to be glad that I was guided by present circumstances, and not by any theory based upon the previous history of the patient.

On the 24th of June, 1842, I was sent for, between nine and ten o'clock, to visit this same lady. The message was urgent; and I found her labouring under a fit of apoplexy. She was lying on her back, in bed, with the head stretched out backwards, the skin hot, breathing stertorous, grinding of the teeth, pulse full and resisting. When I touched the soles of the feet she was sensible of it, but I could not rouse her to speak. Pupils dilated, and insensible to the light of a candle. For the last few weeks her servants have observed her to drag the right leg upon the ground in walking. She went up to bed tired and unwell, but had been much as usual during the day. Had been subjected to some mental excitement in the evening. After being upstairs a short time, she rang the bell for the servant, who found her sitting in a chair unable to give her any directions. Soon after, she vomited a little, was assisted into bed, and able to tell her servant she had a great deal of pain in her head, and wished to lie down. Soon after lying down she had convulsive movements in her arms and the muscles of the

face. I was immediately summoned, and found her in the state I have described. From the state of her pulse and skin, her age (forty-three), and a feeling that almost any other surgeon would think it right to bleed, I opened a vein, and drew about eight ounces of blood. The pulse rose, was quite free, and became more rapid without losing its power; but the skin cooled, and I determined not to allow more to flow. The grating of the teeth ceased, and I endeavoured to make her swallow some aperient medicine, but as soon as it was in her mouth it excited vomiting, and she ejected some undigested food from the stomach. She now breathed without stertor; pulse of fair strength, and about 80. The vomiting was followed by general perspiration: she attempted to raise herself in bed, opened her eyes, but could not speak. Mustard poultices to the feet were then applied, and I waited awhile to watch the effects of the treatment.

At 1 A.M., she was more roused, answered several questions, and expressed by signs a desire to pass urine, which she did in fair quantity. A second attempt to give her medicine again produced vomiting, and was not persevered in, as she seemed tired, and the skin was becoming cool.

25th, 9 A.M.—Asleep, but breathing slowly without stertor; pulse much weaker, 72; had been more sensible early in the morning, and had swallowed a pill, which acted on the bowels half an hour before I visited her; countenance pallid; was unwilling to be roused, and very languid; skin warm; frothy mucus in the mouth.

Empl. Lyttæ Nuchæ. Catapl. Sinap. cruribus. Gave a little barley-water, which the stomach soon rejected.

1 o'clock.—Much the same; fresh sinapisms to the

feet, the others not having had any effect. Met a physician in consultation, who advised the head to be shaved, and five grains of calomel to be given directly.

7 P.M.—Still drowsy, but sensible when roused; swallowed a draught of Inf. Sennæ and Potass. Tart. Bowels not open; breathing natural; pulse 80; scalp hot. Blisters to the calves of the legs.

26th, 9 A.M.—Removed and dressed the blisters. Scalp hot, and skin warmer than yesterday; pulse 80 of fair strength. Appears conscious of what is being done for her, but cannot articulate; has pain in the head; breathing natural; tongue loaded; no relief from bowels; was raised up in bed, and drank some tea; seemed tired with the exertion. Catamenia appeared yesterday morning.

11. P.M.—Breathing more difficult; but during my visit the bowels were relieved, and the breathing again became free.

27th, 9 A.M.—Skin warm; pulse 86; scalp hot; slight stertor. Swallowed another purgative draught and some barley-water, but with difficulty.

2 P.M.—Bowels relieved again; no stertor; pulse 80, more feeble.

9 P.M.—Blister to left side of the head, where she gave signs of pain. Took three grains of calomel.

28th.—Passed a restless night, and at five o'clock A.M. had a violent convulsion: much annoyed by the blister, which I removed. Between this and noon, she had *eleven attacks of convulsion*; the breathing became difficult; the countenance purple; and the pulse 144. It seemed as if some fresh mischief to the brain had accrued, and that the case had become hopeless. In the evening I found she had been free from convulsion for some hours, and had been almost incessantly moving from side to side with all the regularity of an automaton. A little wine

and water had been given. The breathing was easier, and the pulse dropped to 100.

29th.—Passed a quieter night, and is more sensible to-day than she has been yet. No relief from bowels; no power of speech, rather more of swallowing; has taken a little wine and water and mutton broth; skin cool; pulse 70; tongue furred; knows persons in the room; lies in a calm quiet state, with no expression of suffering.

10 P.M.—At three o'clock this afternoon the muscles of the face became convulsed, and remained so six hours without interruption, but the limbs were quiet; the heat of skin increased considerably, and the pulse rose to 100; no relief from bowels; breathing impeded. Cold water to the head, and a purgative injection (which soon returned), cooled the surface; the pulse is now 84, and the convulsions have ceased.

30th.—No return of convulsions; more conscious to-day than at any previous time since her illness; swallows better; skin too warm, and face flushed; pulse 80; no relief from bowels. Two injections have been given to-day without effect.

9 P.M.—Bowels freely relieved; was much cooler in the afternoon.

July 1, 9 A.M.—The physician who attended with me was willing to confine the treatment to a repetition of purgative enemata. Pulse 80; more consciousness; no paralytic affection of limbs; articulation and power of swallowing improved.

9 P.M.—Has had two injections, and bowels relieved twice. She is now cool, and gradually improving. Pulse 70, soft; no pain in the head.

2nd, 9 A.M.—Slept several hours; breathing quite easy and natural; takes mutton broth; pulse 80; conscious-

ness and articulation more perfect; bowels relieved twice the last motion of a healthy colour and consistence; all that had passed previously were dark and offensive; skin cool.

3rd.—Slept nearly ten hours. Speaks better; swallows well. Purgative injections repeated daily.

6th.—Improving. Head shaved again.

7th.—Bowels acted well this morning of their own accord.

8th.—Sat up in a chair for an hour. Took a pint and a half of meat broth, with bread, in the course of the day.

13th.—Injections continued; bowels acting well; pulse 80; skin cool; begins to take solid animal food; is quite sensible, and articulates pretty well.

14th.—Is quite cheerful to-day. Applied caustic for an issue on the arm.

24th.—Got down stairs to-day, and remained there some hours. No paralysis; issue discharging; all going on well.

September 20th.—Is drawn about her garden daily, weather permitting, in a chair upon wheels. Bowels acting; issue discharging; and in every respect as well as before her illness. Catamenia appearing regularly.

In this case the first symptoms of amendment appeared to arise from the vomiting of undigested food; but as a few ounces of blood had been drawn just before, it is not certain to which the improvement was attributable. During the progress of the case I found, that although the heat of skin and flushing of countenance were occasionally very great, the temperature could be reduced, and the force and frequency of the pulse diminished, by very simple means; and that at other times there was a deficiency rather than an excess of action in the system.

Cold applied to the scalp, and purgative enemata, always answered the purpose; indeed, the good effects of the injections (composed of senna, salts, castor oil, and barley gruel) were strongly marked, and they constituted by far the most important part of the treatment: and I feel obliged to the physician who attended with me for his forbearance with regard to the use of the lancet, at a time when his inclination seemed to lean towards more depletory measures than those which were adopted. If the patient had been reduced by blood-letting, and had not rallied, her difficulty of swallowing would have prevented food being taken in sufficient quantity to support her strength: what could then have been done to save her life?

CASE III.

Mr. S., a stout farmer, 80 years of age; joints of his fingers and toes filled with gouty concretions; was attacked on the evening of the 17th of May, 1842, with symptoms of apoplexy. I found him comatose, unable to articulate, almost unconscious of efforts made to rouse him; pulse slow and full; breathing heavy.

A blister to the neck; cold lotion to the head; a dose of croton oil to act on the bowels, which had been sluggish for some days.

Next day he became more sensible, but much inclined to coma, with a bloated countenance and heavy pulse. My assistant ordered four leeches to the temples, and blisters behind the ears.

20th.—Quite sensible; bowels open; has no paralysis.

22nd.—Passed a restless night, and is irritable.

Purgative mixture; and a morphia draught at night.

23rd.—Slept well, and is better. He continued the aperient medicines for some days, and is now quite well.

CASE IV.

J. D., æt. 60, short and rather stout, was seized with hemiplegia on the 15th of September, 1842. He was seen soon after the attack, and treated by blister to the neck and warm purgative draughts. Arteries somewhat ossified.

October 12th.—He now walks about without difficulty, complaining only of weakness in the affected limbs.

CASE V.

M. F., æt. 80 years, a spare, active old woman, was attacked on Friday, Nov. 5th, 1841, just after a hard day's work at the wash-tub, with pain in the head, quickly followed by total insensibility. Next day I was sent for, and found her in profound apoplexy. Stertorous breathing; bronchial rattle; total insensibility. She had been in this state all night. Not able to swallow; pulse feeble.

Empl. Lyttæ amplum Nuchæ. Mustard poultices to the legs.

7th.—Blister drawn. Can now be roused so as to answer questions distinctly, and can move the right leg

and arm; left side appears to be paralysed. Has taken some gruel and castor oil.

8th.—Same as yesterday. Bowels not relieved.

Mist. Cathart. 4tis horis.

9th —More drowsy to-day. Bowels not open.

10th.—Died.

CASE VI.

Ann Ellis, 75 years of age, seized with apoplexy May 17th, 1842. I found her quite insensible; breathing very much impeded with mucous rattle; surface pale, cold, and clammy; pulse almost imperceptible: she seemed to be within a few minutes of her death. I ordered a little warm brandy and water, and left the house, not expecting to see her again. She however rallied, and recovered her sensibility to some extent, until the 25th, when she again became comatose, slightly convulsed, and died.

Although these two last cases proved fatal, they are calculated to exemplify the effort which nature is able to make towards restoration, even when there is serious and fatal mischief in the brain; and surely it is wise and reasonable not to prevent it by depletory treatment, which must necessarily remove every chance of spontaneous reanimation. Who can say that these two women might not have recovered if their *vis vitæ* had been more vigorous? The mischief to the brain must have happened at the first; if partial recovery take place in spite of this, who can point out the degree to which it might proceed where the constitutional strength can be supported? The

vis medicatrix is sufficient to repair external injuries of the severest character, where the constitution can be maintained in a fair degree of vigour. We see daily cases of recovery from fevers and internal inflammations, where parts of delicate construction, and important to life, have been severely, almost mortally, implicated; the remedial agent being this same *vis medicatrix*, assisted by such means as we possess for supporting the powers of the constitution. In some chronic cases of organic disease, we witness the same power at work to delay the fatal result as long as possible; the length of time being often proportionate to the degree in which art is able to support the general strength. Why are we to distrust this powerful agent where disease or injury of the brain is the cause of danger? Do not some of the cases I have related prove it to be efficient?

It is said, that by letting blood freely in cases of apoplexy, extravasation may be stopped, and further mischief prevented. But what has been the result of such large depletions? Unfortunately the recoveries are far too small in number to warrant any just inference in favour of this usual plan of treatment; and when it is considered that bleeding will sometimes itself produce the symptoms under which apoplectics die, surely we should pause to inquire whether such fatal issue may not be the effect of the treatment, rather than the necessary consequence of the disease.

“*Magnæ sanguinis detractioes, graviores et fere perniciosiores effectus habent; arteriis enim variisque cordis saccis multum et subito relaxatis, viribusque eorum sic imminutis, sanguinis impetus adeo deficit, ut ad excitandum suisque muneribus aptandum cerebrum non amplius sufficiat, unde vertigo, nausea, vomitus, animi defectio,*

et non modo cordis arteriarumque actio, sed omnis motus atque sensus interruptus.”

“Ingens et subita sanguinis jactura omnibus brevi et multum nocet, nec raro mortem affert. Hæc enim non modo *insignem debilitatem*, et *vertiginem* et *nauseam*, aut *vomitum* et animi defectionem, sed *convulsiones quoque generales*, et *plerumque lethales*, inducit.” — *Gregory's Conspectus*.

“Largæ et repetitæ sanguinis detractiones omnibus apoplecticis et paralyticis, nullo delectu habito, utiliter aut tuto adhiberi certe non possunt. Etenim juniores, et robusti, non tam obnoxii sunt his morbis, quam pueri infirmi, et effæti senes, in quibus vires nutriendæ sunt, et excitandæ, potius quam minuendæ; dum multa sanguinis profusio omnes naturæ conatus reprimat, et tenues vitæ reliquias penitus extinguit. Quod si consulamus experientiam, hæc, quantum possum judicare, testatur copias sanguinis missiones sæpe nocuisse, easque in non paucis ægrotis tutius fuisse prætermittas.” — *Heberden, Comment*, p. 300.

In the first case, and probably in the second, emetics produced very beneficial effects; and by some few practitioners they have been considered the proper remedy for apoplexy. Yet is the fear of their being injurious so prevalent, that we are advised strictly to avoid them. Abercrombie says, “the use of emetics in apoplexy is as old as the days of Aretæus, and they have been employed at different times by physicians of the first eminence, among whom may be mentioned Etmuller, Sydenham, Boerhaave, and Lieutaud; and the practice must therefore have some foundation in observation and experience. There can be little doubt that, in the early stage of any apoplectic affection, the use of an emetic would be a very

hazardous practice." He, however, strongly recommends purgation. "This is always to be considered as a most important and leading point in the treatment of apoplexy; and though, in arresting the progress of the disease, our first reliance is upon large and repeated bleeding, the first decided improvement of the patient is generally under the influence of powerful purging." (*On Diseases of the Brain*, p. 289).

Now when we bring our unbiassed judgment and experience to bear upon the question of the comparative safety of emetics and purgatives, what do we find to be the result? Why, that we can find scarcely a case where apoplexy has been produced by the operation of an emetic, whereas it is not an unusual occurrence for a person to have a seizure during an evacuation of the bowels. I believe this is an indisputable fact, and to my mind is quite decisive of the act of vomiting being as harmless, if not more so, than that of alvine evacuation.

I think it must be allowed by every candid observer that the legitimate inference to be drawn from my own experience of apoplexy, as exhibited in the cases I have published, is, that the non-depletory mode of treatment is the most successful: the reported cases of other practitioners indirectly corroborate this inference. I have collected them in large numbers; the treatment has been, for the most part, profuse expenditure of blood; and the deaths awfully numerous.

It would be absurd to doubt that the cultivation of morbid anatomy has been immensely beneficial to the practice of medicine; but it appears that, with reference to diseases of the brain, it has overstepped its proper bounds, and usurped the position which the practical experience of the past and present ages is entitled to

maintain. Nearly all our reasoning with respect to the treatment of apoplexy is founded upon certain post mortem appearances, some of which are probably more the consequence of death than of disease; the treatment itself is not based upon what has been successful in curing the disease (for the usual plan is eminently unsuccessful), but upon arguments, brought forward with no slight degree of plausibility, concerning the occurrence, causes and removal, of extravasation of blood or serum in the brain. It is well known that such extravasation is not the only cause of even fatal apoplexy, for cases have occurred where no diseased appearances have been discovered in the brain after death. It has been shown, by others as well as myself, that apoplexy, severe and threatening, has been cured without bleeding: the opinion that it can be so cured appears to be slowly gaining ground. Let us put aside for a while our preconceived notions, and by patient examination of the effects of remedies, endeavour to enhance the credit of our art by lessening the fatality of this serious disease. Perhaps it must still be granted that venesection is advisable in some cases of apoplexy: I believe these cases to be very rare; for I have seen the heat of skin, flushed countenance, strong and rapid pulse, laborious breathing, convulsions—symptoms indicative, if any, of the necessity of abstracting blood—give way under the simple employment of cold to the shorn scalp, and purgative clysters, without the assistance of any depletory measures likely to occasion subsequent loss of power. What could apparently be more desperate than the situation of my patient (Case II.) at noon on the 28th of June? The satisfactory removal of the severe symptoms, and the present convalescent state of the patient, are the

best arguments in favour of caution and moderation; and the best answer to the theory that, in apoplexy, the only way to preserve life is, by art, almost to destroy it.

“Serum est cavendi tempus in mediis malis.”

I had just completed this paper, when, on the morning of the 13th of October, I was summoned to attend Mrs. A., whose case I have already related (No. II.) She had been subjected to more excitement than usual, made two or three calls the day before, and afterwards dined off food not easy of digestion. About five o'clock A.M. she awoke her husband by grasping his hand, but could not speak. She rallied a little, and was assisted out of bed to the night-chair. The bowels were relieved; and, as she became drowsy and slightly convulsed, I was sent for. She was comatose, with rather full pulse and perspiration. Drew up her legs when I tickled her feet. Could not rouse her; but during my attempts to make her speak her face became horribly distorted, and she had a severe general convulsion of some minutes' duration; she remained quite comatose after the convulsion had subsided. I applied cold cloths to the scalp, and gave a strong purgative injection. In three hours I visited her again: the coma had remained about an hour after I had left, and the bowels had acted freely; she had vomited a little bilious matter; there had been no more convulsion. She could now articulate tolerably well, and was sensible enough to ask me to dress her issue; she had chilled once or twice, and removed the cold application from her head; and when her arm was uncovered during the dressing it became cold, and all “goose-flesh.” Would

it have been safe to have reduced the heat of skin and strength of pulse by withdrawing blood at first? In the evening another injection was given : she was more sensible ; but the tongue was foul, and she complained much of pain in the head.

Cold vinegar and water to the forehead.

15th.—Another injection, followed by relief from the bowels, and perfect restoration of her senses ; pulse quiet ; tongue much cleaner. Ate some breakfast, and was well enough to settle wages with a servant who was about to leave.

Coltishall, near Norwich,

October 16th, 1842.

THE END.

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